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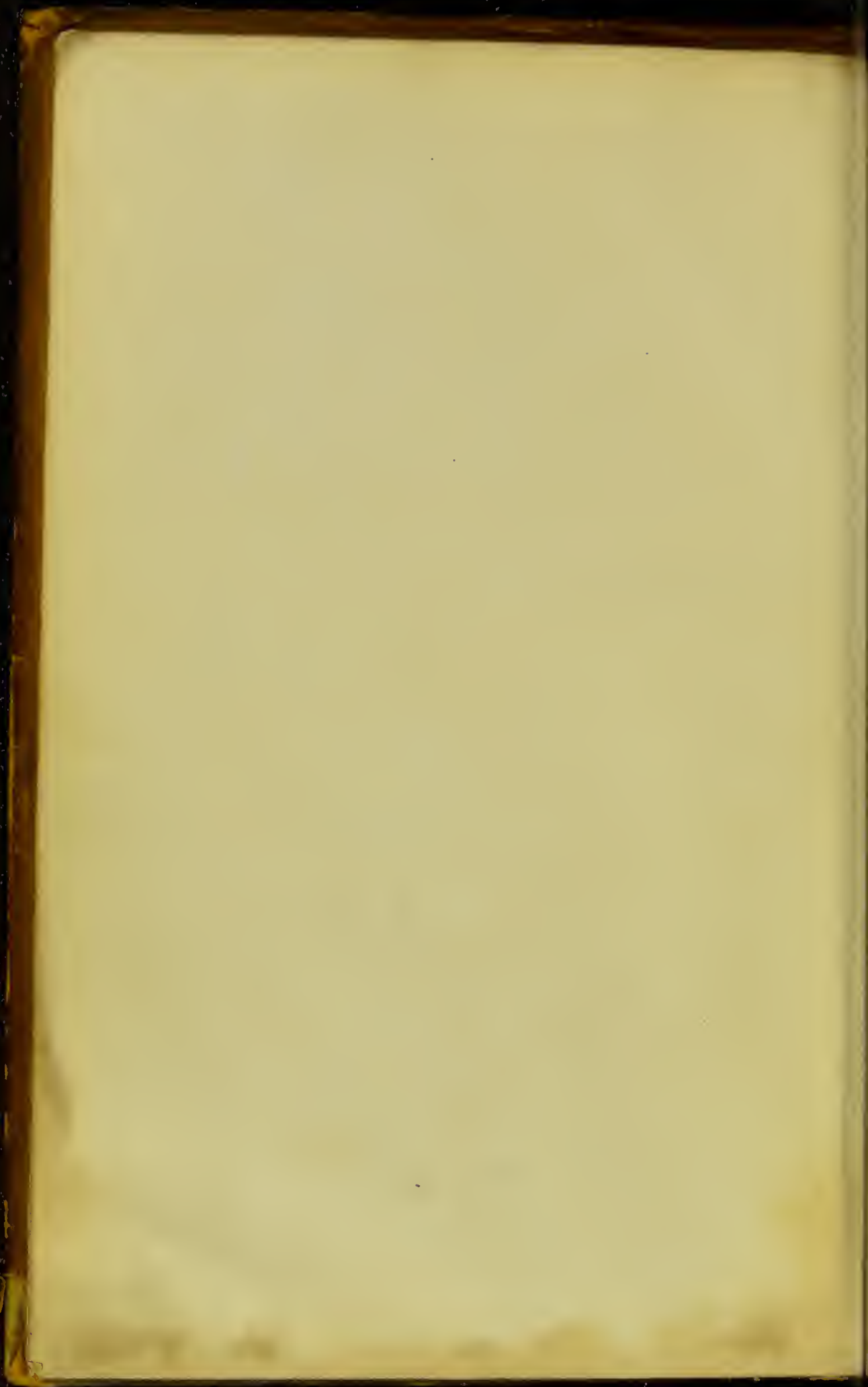
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A
TREATISE

ON THE

NATURE AND CAUSES OF THE YELLOW FEVER;

WITH

OBSERVATIONS ON FEVER AS IT GENERALLY OCCURS
ALONG THE COASTS OF THE MEDITERRANEAN,
AND ON SHIPBOARD;

TENDING

TO SHOW ITS ENDEMIC NATURE—THAT IT ARISES FROM
LOCAL CAUSES, AND IS NOT CONTAGIOUS;

TOGETHER WITH

REMARKS AND CASES ILLUSTRATIVE OF THE EFFICACY OF
BLEEDING AND CALOMEL IN CONTINUED FEVER.

BY

ALEX. HEASTIE, SURGEON, R. N.

TO WHICH IS ADDED,

A SERIES OF METEOROLOGICAL TABLES,

KEPT BY THE AUTHOR,

SHEWING THE MEDIUM TEMPERATURE AND GENERAL STATE

OF THE WEATHER THROUGHOUT THE ARCHIPELAGO

AND LEVANT, DURING THE YEARS

1825, 1826, 1827, & 1828.

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TO
SIR GEORGE MONTGOMERY OF MAGBIEHILL, BART.

THIS VOLUME
IS RESPECTFULLY INSCRIBED,
AS A MARK OF GRATITUDE AND ESTEEM,
BY HIS VERY HUMBLE SERVANT,

THE AUTHOR.

WEST LINTON,
29th January 1830.

CONTENTS.

PART I.

| | |
|--|--------|
| Preface, | Page 9 |
| Symptoms and Progress of the Yellow Fever, | 17 |
| Appearances upon Dissection, | 21 |
| Diagnosis, | 26 |
| Nature and Tendency of the Yellow Fever, | 27 |
| Endemic or Epidemic? | 35 |

PART II.

| | |
|--|------------|
| Observations on the Causes, Prevention, and Cure of Fever, as it occurs on the Coasts of the Mediterranean, and on Shipboard, | 51 |
| General Symptoms of Typhus, | 53 |
| Prognoses, | 55 |
| Appearances upon Dissection, | 56 |
| General Observations upon the Causes, &c. &c. | <i>ib.</i> |
| As influencing the Health of Seamen, | 65 |
| Economy on Board of Ship, | 67 |
| Bedding, | 69 |
| Effects of Drinking and Excess, | 70 |
| Natural Localities of Climate, | 74 |
| Gibraltar Fever, | 77 |

PART III.

| | |
|---|-----|
| Remarks on the Efficacy of Bleeding and Calomel in Continued Fever, | 91 |
| Under what circumstances Bleeding is Dangerous, | 97 |
| Cases illustrative of the Efficacy of Bleeding and Calomel, | 105 |
| General and Particular Indications of Cure, | 119 |
| METEOROLOGICAL DIARY, | 123 |

ERRATA.

Page 94. *line 14. for force read disease.*

— 110. *line 12. for $\bar{3}$ ij. read 3 ij.*

PREFACE.

THE pathology of fever is too little understood, and involved in too much obscurity, to induce any individual author, whose aim is the more humble one of practical utility, to spend much of his time in its investigation. It would be better for the cause of humanity, and of much real benefit, plainly to state such facts only as were sanctioned by experience, and might be confirmed by more common observation. The notices relative to the yellow fever (typhus icterodes) contain a series of truths, consistent with what actually occurs in the symptoms, tendency, and history of the disease;—they may be applied to febrile irritations generally, but more so as they prevail in warm regions, and within the tropics.

The writings of those eminent physicians, Drs Armstrong, Stoker, Johnston, &c. &c. will afford ample information relative to the pathological physiology said to be connected with febrile irritation. I wish to avoid for the present, as much as possible, all theoretical comments; neither do I presume to add to the confusion which already exists relative to pathological opinion;—my object is the more humble one, of endeavouring to record the history of fever as it has

presented itself to my observation during several years' experience abroad.

If it should be said, that the subsequent observations are little more than a repetition of circumstances formerly known; it is the more to be regretted, that the utility to which they direct has been neglected by many, or not properly understood, and the mode of treatment to which they refer, so little attended to. Their being again identified, and recommended to the notice of the young medical practitioner, is an inducement sufficient to repay any little trouble I may have had in collecting and arranging them.

Besides, medical men are by no means unanimous, as to what immediate and general mode of treatment might be best suited to stop the progress of the symptoms, and arrest the fatal consequences which almost always attend prevalent malignant fevers abroad.

In reference to the Mediterranean fever, whether in its more mild or concentrated form, the curative plan which I mention in the subsequent observations, is principally founded upon the utility of an early depletory system, and the properly regulated use of calomel. These remedies have, with me, generally fulfilled such indications as were expected, and rendered my practice, while abroad, uniformly favourable.

The innumerable publications now extant, relative to the history, nature, and treatment of febrile disorders, compiled by men whose extensive practice and profound knowledge in the science of medicine are founded on an accurate acquaintance with the principles of their profession, must leave but little hope of success from the endeavours of any ordinary medical person attempting to innovate upon the theory of this disease, or establish any mode of cure different from

those now generally supported. It has been observed, however, that as every man is a debtor to his profession, from which he seeks to obtain countenance and profit, so he is bound, in return, to make known such knowledge as he may have acquired, and to practise it upon liberal and honest principles. Without interfering, therefore, with general theory or particular practice, I shall endeavour to state a few obvious facts, relative to the history, causes, and treatment of that form of disease which I allude to, as they occurred during the course of my practice, or otherwise presented themselves to my notice.

Cases of continued fever are of frequent occurrence on board his Majesty's ships and vessels in the Mediterranean, attended with symptoms more or less active ; but from the general mildness of their attack and symptoms, and from their not becoming prevalent, they are commonly looked upon as entirely different in their nature from those more aggravated cases which manifest themselves in the towns and villages on shore, and on board of vessels stationary in harbours. While I was on board of H. M. ship Queen, the many cases of what is termed (and not improperly) the common inflammatory fever of the Mediterranean, which occurred to my notice, together with the subsequent opportunities I had of personally observing, while at Gibraltar, the more aggravated cases of the then prevalent disease, seemed to prove, that the nature of those altered forms of fever were in no way essentially different as to their remote or exciting, and proximate causes ; and that the general indications relative to their cure, required only to be prescribed in a degree more or less active, according to the urgency of the symptoms. The opinions and observations relative to the Gibraltar fever, (and which will be

found under the head of a separate chapter), appear to me to be very correct, and worthy of observation. They were the substance of a communication presented to a former Governor of that garrison, by a principal medical officer there; and from the experience of that gentleman, as chief medical attendant at several important stations in the West Indies, it would appear, that the yellow fever there, “the destructive effects of which our naval and military departments have so often experienced to a lamentable extent,” is only a modification of the same disease, which (unless when aggravated by local or other causes) is apt to manifest itself in the form of a mild remittent febrile disease, or little more than a common ephamera. If this identity can be established, and those causes which seem to increase the virulence of its nature pointed out, surely much might be effected, through the diligence of an ingenious medical superintendant, to mitigate the afflictions and reduce the mortality incident to many a valuable and worthy individual.

In treating of the nature and causes of the yellow fever, I have extracted from an Italian publication, which was put into my hands by its author; *—a person who had extensive opportunities of witnessing the progress of febrile disease in the principal sea-port towns of Spain, and also at Gibraltar. He was impressed with the conviction, that a treatise upon the yellow fever, in which the nature and disposition of that disease might be minutely analyzed, and in which a rational plan of cure might be proposed—in what manner to attack, and finally to arrest its fatal progress—was much needed. In attempting to fill up this deficiency, he does not seem to have been actuated by any ambitious idea of exclusive merit;

* Dr Gimellaro.

but having noticed, analyzed, and cured this disease, he conceived himself responsible that the public should be made acquainted with the result of his applications.

Little or nothing of a satisfactory nature could be learned from the confused and contradictory statements which he received from the Spanish medical practitioners, relative to former epidemic visitations; which each modified so as to correspond with his own views of the disease, whether as typhus, synochus, bilious remittent, or even intermittent fever.

Persuaded that, in treating of medical subjects, the principal intention of the writer ought to be the faithful relation of the progress of the disease, and of such facts and observations as he may have learned or made, I would not have extended my observations much beyond that of the history, symptoms, and treatment of fever, were it not that I have found myself under the necessity of supporting those reasons which induce me to believe that this fever (*typhus icterodes*), as well as the other ordinary forms of continued fever, is neither epidemic nor contagious. I have, from this circumstance, entered into a more minute discussion of several propositions; but have always endeavoured to found my reasoning upon facts, and my own observations, and have seldom had recourse to hypotheses, unless when the subject of investigation was such as to elude more obvious demonstration.

Publications relative to the prevalent fevers which are met with abroad, are uncircumstantial, and by no means satisfactory, in referring to any given mode of cure which might properly be adopted under general circumstances. I am induced, therefore, to imagine, that this treatise may prove of some utility to young medical men going abroad, and con-

nected with the public service. I should be much gratified if my maxims relative to the supposed contagious nature of these complaints might be taken into consideration ;—commerce, as connected with too tedious quarantines, might be much facilitated on the one hand, and public safety secured upon the other.

WEST LINTON,
1829.

PART I.

OBSERVATIONS

ON THE

NATURE AND CAUSES OF FEVER.

CHAPTER I.

OF THE SYMPTOMS AND PROGRESS OF THE YELLOW FEVER.*

A DISEASE which, in the course of three days, generally decides the life or death of the patient ; which invariably follows, in the course of its symptoms, three marked and distinct stages,—of violent febrile invasion, of placid remission and apparent alleviation, and of sudden and general debility,—certainly contains in itself sufficient peculiarities to attract the attention of the physician,

* I do not advert to the propriety of using the term Yellow Fever, but as a more common distinction from the other forms of typhus : It is an appellation which has been very generally adopted, and is universally understood.

and to become an important object of his investigation:—Such is the yellow fever, of which we intend here to give an exact description and a minute detail.*

An oppressive lassitude or weariness, and want of resolution to ordinary exercise, generally precede the febrile attack; which commences with slight shiverings,—violent pain of head, chiefly affecting the sinciput,—pain of back and loins, attended with a burning heat over the whole surface of the skin, which becomes rough and dry. The pulse becomes full and quick, the respiration laborious and difficult, and the pain of loins becomes so much affected by the act of inspiration, that the patient would willingly, if possible, avoid the effort. The eyes become inflamed, dull, and moist; the tongue dry, and an unquenchable thirst, constantly urgent, with anxiety and delirium. There is constant sickness, attended with irritability of stomach, and vomiting of a bilious matter of a greenish colour; but

* It may be inferred from the following remarks, that the different forms of continued fever, typhus icterodes, gravior, mitior, synochus, &c. &c. are only gradations in the same scale of disease; and as the typhoid or inflammatory tendency may happen to predominate, so the symptoms will vary as well as their mode of cure: that they are produced from the same exciting causes, and not contagious.

Wherever prevalent fever exists, whether in the palace of the prince or cottage of the peasant, we must look for its cause in defective local economy, want of cleanliness, or proper ventilation.

from this effort the patient receives no relief. The secretions are suppressed, the body becomes dry, and the urine scarce; the intellectual functions are deranged, and delirium frequently manifests itself. The patient labours under the complication of distress arising from these symptoms for twenty-four hours, without experiencing the least repose; but, complaining more and more of the distressing pain of head, tries every position of the body under restless anxiety to procure ease. At the expiration of this period, the pain of head gradually begins to subside, the febrile heat diminishes, and the patient at last finds a position in which he can repose. The tongue, although moist, remains covered with a foul whitish incrustation;—the stomach feels as if oppressed with a weight, and frequently affected with a deep sense of pain, which comes on with transient sensations of sickness;—the eyes retain their inflamed appearance, but neither the dulness nor the humidity is so evident;—and patients have been observed, in this second stage of the complaint, to leave their beds and walk up and down their apartments, and even leave the house to attend to public business!

This deceitful calm, this insidious and short intermission of rest, however, is only the precursor of consequences the most fatal. The patient

suddenly passes into the third stage of the disease, and exhibits a series of symptoms of the most unfortunate description. The skin becomes of a pale greyish colour; the white of the eye turns yellow, and, intercepted by the vermilion ramifications of the vessels, forms a strange contrast of colouring; the forehead is covered with drops of cold sweat—the lips pale and colourless—the mouth dry—the tongue generally parched, and intersected with rough brown longitudinal streaks, while the margins and point are of a vivid red and yellowish hue. The gums swell and bleed upon the slightest touch, and also the tongue; epistaxis and menorrhagia often manifest themselves, but without any relief to the patient; the breathing becomes difficult and oppressive, and is attended with a wheezing sound and dilatation of the *alæ nasi*; the stomach is painful, and the patient expresses himself, “as if he felt it internally irritated with innumerable punctures;” hiccup ensues; and, finally, vomiting of a black unctuous matter, somewhat resembling the grounds of coffee, and possessed of an acute fermentative odour. The excretions by the bowels are restricted, and the urine retained, but a total suppression of this last secretion more frequently marks the fatality of the case, and is the forerunner of death. Pains of the limbs concur to afflict the unhappy sufferer;—

the blood in a state of dissolution runs from the nose, mouth, and vagina, and even sometimes from the eyes and from under the nails;—the breast and shoulders are covered with innumerable purple spots, the discoloration of which gradually increases;—the extremities become cold, the pulse imperceptible, and a cold sweat suffuses all the body. Without any derangement of the intellectual functions, the life of the patient draws gradually to a close, and, expiring between the third and fifth day from the commencement of the disease, he thus finishes his miserable existence, the body becoming almost instantaneously yellow.

Upon dissection, the vessels of the brain and its membranes are found to be in a state of turgescence, with remarkable adhesions of the dura mater, in various points, with the pia mater, and of a yellow colour; the ventricles full of a serous matter of the same colour; the choroid plexus very brown; the lungs and heart nothing altered from a natural state; the cellular substance is entirely of a yellow tint, as also the peritoneum and omentum; the vessels of the mesentery are very turgid; the liver is of an obscure yellow outwardly, but not altered in structure; upon penetrating into its substance, however, the *pori bilarii* are found to be more exten-

sive than usual, and full of greenish-coloured bile, which becomes gradually more obscure as it advances to the hepatic duct. The gall-bladder is frequently contracted, and contains a black glutinous matter ; sometimes distended, and full of dark-coloured bile. The brown-coloured matter becomes more obscure in the ductus cysticus, ductus choledochus, duodenum, and stomach, where it is entirely black, and constitutes the matter vomited up previous to the fatal issue of the disease. The intestinal canal is diseased, and its internal coat corroded and mortified in those parts where this matter happens to be retained, and also the villous coat of the stomach is corroded and diseased in various places. The spleen and pancreas do not seem affected, but the kidneys and supra-renal glands are much enlarged ; and the vessels of the substance of the kidneys are enlarged, and full of blood in a dissolved and putrid state. The bladder is contracted and without urine, and every minute vein which becomes divided by the knife of the anatomist, discharges blood of a dark colour and in a state of dissolution.

This is positively the ordinary course of the yellow fever, and the appearances exhibited upon dissection ; but when the progress of the disease has been influenced by the operation of medicines, many varied appearances take place, and medical men in different quarters of the world

have stated peculiarities in the symptoms, and varieties upon dissection, equally singular and varied.

Dr Linning saw in America this fever attended with vomiting entirely of corrupted blood, and sometimes also blood discharged in the form of sweat. Indeed Dr Mosley has verified the first of these symptoms, but he never witnessed the latter. He remarked, that when the extremities became cold in the third stage, the entire upper part of the body continued to retain its heat. Dr Chisholm observed in the Bullam fever, that the patients, during the first day of the disease, were subject to a kind of comatose sleep, and assures us that hæmorrhages were never critical. He mentions having observed in many subjects a painful affection of the testicles, and gives, from the change of the sick person's voice, a favourable prognosis; the chance of recovery being in proportion as it approaches towards the natural state.

He also makes mention of distressing pains affecting the popliteus and gastrocnemii. It is well ascertained that the pulse never intermits in this fever, and that in the third stage it is often so reduced as not to beat above 30 in a minute. Two kinds of eruption affecting the lips are mentioned; the one similar to what evinces itself in ephemeral irritation, and the other as if the lips

had been touched with the strokes of a pencil in black, chiefly upon the upper lip, and always fatal; and it is surprising to observe sometimes a distortion of the penis accompanying urinal suppression. Dr Rush frequently observed patients fall into syncope or apoplectic stupor upon the first attack of the disease, and the whole body affected with insufferable pains.

Dr Lind found, upon dissection, the liver in a putrid state; and the black bilious matter contained in the stomach effervesced when thrown upon the ground. Dr Jackson found the liver tinged of a deeper yellow than any of the other viscera, and the stomach always distended with wind. Dr Mitchell, in the yellow fever of Virginia, in 1737 and 1741, found the liver much diseased, and the gall-bladder full of a thick black matter; and almost every investigator has found the stomach and intestines affected from the black matter, which mortified their internal coats in various places: This consequence may generally be looked upon as the effect of the yellow fever, and not the result of other previous disease.

When the power of medicine has had the influence of overcoming the terrible fever, still the patient, though snatched from the grave, remains in such a state of general debility as to require the careful attention of his medical guide, and the

vigilant services of those appointed to nurse him. He is faint and languid, and his skin, together with the conjunctiva and sclerotica, are quite yellow; the gums are still tender and full of corrupted blood; and the eyes are surrounded with a livid areola. The pulse is low, and the heat of body much reduced; the evacuations scarce, and the tone and force of the system quite gone. But as the patient begins to recover, and convalescence to be established, the appetite improves so rapidly that no ordinary diet will satisfy him: His convalescence is long and tedious, and often complicated with a degree of danger not inferior to the original disease.

The generality of authors do not mention any distinct crisis in this disease. There are instances, however, of diaphoresis having produced a happy solution; and I have myself witnessed an occurrence of this kind in three different cases. In the fever of Philadelphia, in 1793, a profuse diaphoresis entirely cut short its course. According to Dr Mosley, epistaxis, if preceded by sweating, was also critical; but this unfortunately rarely makes its appearance.

This disease has been observed to terminate in a metastasis to the parotids or glands in the armpits, which ends in suppuration. I observed a case of this kind in the hospital at Gibraltar;

and Ximenes observes, that he has seen many such during his practice in the Lazaretto at Cadiz.

DIAGNOSIS.

In the midst of such a variety of symptoms, we should endeavour to determine those which may chiefly enable us to know the disease from the early attack, and without waiting the fatal issue of the complaint. The yellow fever consists of one paroxysm of seldom more than thirty hours' duration; is characterized by violent pain of head, confined chiefly to the forehead, and particularly felt at the bottom of the orbits,—by a quick and full pulse, but not hard, attended with excessive heat and dryness of skin,—and an affection of stomach, sometimes of simple nausea, sometimes attended with vomiting. On the termination of the febrile stage of the paroxysm, the pulse becomes slow and feeble; and in a few hours the third stage of general debility commences, announced by diminished heat, great weakness of pulse, and painful and difficult respiration. If as yet the interference of art has done nothing for the benefit of the patient, he will have a sense of deep severe pain of stomach, accompanied with a yellowness of the sclerotica, followed by hiccup, and vomiting of black matter—suppression of urine—petechiæ—death.

CHAPTER II.

OF THE NATURE AND TENDENCY OF THE YELLOW FEVER.

HAVING presented a statement of the symptoms of this disease, I shall now enter into an analysis of its nature, reporting from facts, and laying aside all systematic and theoretical ideas. The statements and inquiries relative to this fever—whether it be *synochus* or *typhus*, or the plague of the Levant changed in aspect under the climate of the West Indies, as Dr Warren imagined; if it be a putrid bilious fever, as Dr Hillary thought; if it be the *causus* of Hippocrates, with the only difference of the black vomit, or the *morbis niger* of Hippocrates; or, finally, if it be a modification of the bilious remittent, as most of the Spanish practitioners assert;—all this is useless contest, which can contribute very little to practical utility. The yellow fever is sufficiently marked, in its symptoms and effects, to entitle it to be considered and investigated by itself.

The propriety upon which the medical indications ought to rest, and the reasoning by which our efforts ought to be directed, should be formed upon the appearance of the progress of the disease, and the correct observance of its symptoms. I will commence, therefore, my analysis of the disease in general, remarking, that the sole paroxysm, the affection of the stomach and alimentary canal, together with the general debility, makes it evident that the nervous system, and viscera of the abdomen (alimentary canal), are chiefly affected, and suffer most under the influence of the yellow fever. The circumstances which concur to render the last of these consequences the more evident are, the nausea or vomiting, the deep abdominal pain, the diminished evacuations, the yellow appearance of the eyes and skin; whilst the pain of head, the quickness of the pulse, the dryness of the skin, and general debility, are consequences depending upon the affected nervous system.

The disordered action of the biliary organs produces a morbid secretion of bile, and this, acting upon the villous coat of the stomach, obliges that viscus, from the unusual nature of the stimulus, to contract, and endeavour to unload itself by the œsophagus, producing sickness and vomiting; which, in the first periods of the disease, consists alone of greenish bile, the same which produced

the convulsions of the stomach. This bilious matter, producing the same hurtful irritation upon the internal coats of the duodenum and intestinal canal, causes the deep painful sensation which is felt there; and this exciting a degree of action in the intestines, but which, not being the natural peristaltic motion, causes a retention of the feces; and they, becoming drained of their moisture by the action of the absorbents opening upon the internal surface of the intestines, are rendered dry and hard, and their evacuation becomes thereby difficult and sparing.

The action of the absorbents being preternaturally excited from the irritation or stimulus of the altered bile, carries it rapidly into the system, and spreads it throughout the whole cellular extent; and thence the skin, the membranes, and in a manner the whole body, becomes yellow.

It is very evident, that the pain of head indicates an affection of the brain: but it is necessary to ascertain, if it be an increased excitement of the energy of the brain which induces its own proper vessels, and those of its membranes, to become so sensibly affected by the blood; or whether it be rather a want of energy which impedes, and so acts upon the force of the circulation as to induce rapid congestion of the larger veins and sinuses of the dura mater, which oppresses and renders tor-

pid the whole nervous system. I am of the latter opinion, because it may be easily perceived when increased nervous energy exists. This is obvious from several symptoms, but principally from the hardness of the pulse—this peculiarity being nothing more or less than the action of the nervous coat of the arteries upon the circulating blood; whilst its quickness, on the contrary, indicates a debility of the nervous system, which not affording the power of reaction to the muscular coats of the arteries, permits their motion to be performed by the sole contractile efforts they possess. Now it so happens, that in patients affected with the yellow fever the pulse is never hard, but, on the contrary, quick and full in the primary stage of the paroxysm; whilst in all fevers truly inflammatory, and in particular inflammations especially, where the energy of the nervous system is awakened, the pulse is always hard. Besides this, however, the sudden transition which the patient has into a state of general privation of strength, accompanied with a low quick pulse, the suppression of urine from the loss of action in the kidneys, and the dry parched skin, all demonstrate clearly, that even from the commencement of the disease the energy of the brain had been lost, and that congestion had in consequence taken

place, and produced general torpor in the whole nervous system.

Having endeavoured, therefore, to establish that the alimentary canal, and the nervous system, are chiefly affected under the violence of the yellow fever, it is necessary to examine which of the two is primarily disordered, and upon which the other depends.

The diseased secretion of bile may appear, at first sight, to be the cause of this disease. Many have thought so, and endeavoured to prove it; and the greater part of the Spanish and French physicians are certain of the fact. Reflecting, however, that a diseased state of the biliary organs could only be the result of particular and unusual stimuli directly exerted upon them, in order to account for such a cause, it would be necessary to recur to innumerable hypotheses, without the hope of establishing any demonstrable circumstance or satisfactory evidence. And if, by dint of refined reasoning, we should be able to point out some morbid agent directly influencing these organs, its effects would not be so violent and singular, as the biliary organs are by no means of such primary importance in the animal economy, their disordered state being sustained, often to considerable extent, without much suffering; and, at all events, the consequences would not

be so rapidly fatal ; as is evident from the daily observation of innumerable cases of acute, and also of chronic affections of the abdominal viscera, which in fatal cases we often observe upon dissection to be enlarged and obstructed,—consequences not evinced in the yellow fever.

On the other hand, how easy to find a proper cause in one which attacks directly the energy of an establishment so extensive as that of the nervous system, the important spring and principle of every vital power? and this, too, when we observe a nervous torpidity and syncope produced solely from the application of a bad smell or odour to the pituitary membrane of the nose!

I have no doubt, that the nervous system is the principle which is attacked in the yellow fever; that its disordered state, and reduced energy, gives origin to the diseased actions which molest the biliary organs and abdominal viscera. In order to prove this, it is only necessary to direct our attention to the symptoms; and the prospect which they will afford, must finally tend to establish and confirm our opinion relative to the nature of the disease.

Unwillingness to exertion, and lassitude, precedes the paroxysm; and the violent pain of head which accompanies it, produced, as we have already observed, from congestion in the brain, in

consequence of diminished energy in the nervous system, and evident upon dissection; and the peculiarity of the frequent pulse, even in the height of the febrile invasion, being destitute of hardness,—a circumstance which we have already mentioned as also depending upon a diminution of nervous excitement; the dryness of the skin, without any tendency to perspiration; the sickness, and affections of the stomach, which are always, in other disorders, attended with increased sweating, show clearly that the sympathy of this organ with the skin is suppressed; an event which could only result from a debility of the nerves, which are the communicating medium.

The rest of the symptoms are equally the consequence of this debility. The viscera, deprived of their usual excitement and force, perform their functions in an irregular and disordered manner; and the volume of blood being increased from the suppression of the secretions, its receptacles or vessels become unusually distended, and an increased heat is evolved throughout the system, which, much increasing the irritable nature of the bile, renders it a bad and hurtful extraneous irritation wherever it is applied. In the mean time, the muscular coats of the arteries losing their force as the febrile heat subsides, their power of

contracting is sensibly diminished, and the pulse becomes slow and feeble. The blood, in a manner disorganized during the febrile reaction, is not freed of its impurities in consequence of the diminished activity of the secretory organs; it remains as if dead, and, in a dissolved and corrupted state, escapes from the minute extremities of its vessels in various parts of the body. The unhealthy bile at the same time irritating the stomach and the intestines, diseases their coats, and excites them to strong convulsive efforts. Part of their contents are ejected by the *œsophagus*; but a remaining portion continues incessantly to vex the bowels, and corrode the whole of the alimentary canal, and, without meeting any healthy reaction to expel it, ulcerates and mortifies their coats, and the patient perishes from dissolution and mortification.

Nervous debility being the cause of all the symptoms of the yellow fever, there remains no longer any doubt of its proper nature, and that it is a febrile disorder of nervous atony.

CHAPTER III.

ENDEMIC, OR EPIDEMIC?

Alcuni erano di più crudel sentimento dicendo niun' altra medicina essere contro alle pestilenze migliore nè così buona, come il fuggire loro davanti. Ciò era di schifare e di fuggire gl' infermi e le lor cose; e così facendo, si credeva ciascuno a se medesimo salute acquistare. Bocc.

It now remains to consider, whether this fever be endemic or epidemic?

Many of those who have treated of this complaint endeavour to prove its epidemic nature, assuring us, that this fever is always imported from other countries into those places where its ravages spread such fatality. Dr Warren imagined that the plague, brought to Marseilles, and from thence transported to the West Indies, constituted the yellow fever in 1721 or 1722. M. Hughes is of the same opinion; and Sauvages, in classing it, denominates it *Pestis Siamensis*. D. Ulloa, a Spaniard, says, that the *vomito prieto* was not known in Carthagená, and in the islands of America, before 1729 and 1730; and believes that the disease was carried thither by Commodore D. Domingo Giustiniani, and D. Manuel

Lopez Pintado, with the gallies which came from S. Martha.

Dr Chisholm believes that the Bullam fever originated on the coast of Africa, from the too crowded state of a vessel called the Hankey, and from thence it might have been carried to America; and Dr Monson, in his history of the fever of 1794 in New Havre in Connecticut, seems evidently to prove the epidemic nature of the yellow fever.

On the other hand, however, Dr Hillary believes this fever to be indigenous to the islands and continent of America beneath the tropics. Dr Mosley is of the same opinion, although he distinguishes it from the fevers which annually manifest themselves after the slighter autumnal rains. Mr Lind thinks that it may be produced spontaneously, as happened in Cadiz in 1764, during an unhealthy south wind, and a hazy damp atmosphere. Dr Bruce of Barbadoes believes it to be endemic; and in fact relates, that in 1798 there was instituted in Philadelphia and New York the most strict quarantine, for fear that the disease might be brought from the islands by the mercantile vessels, and the sailors communicate the infection. Notwithstanding this, however, the disease raged with unusual fury; whilst Charlestown, Norfolk, Alexandria, Baltimore, Bos-

ton, and Salem, without any precaution whatever, remained totally exempt from the complaint: and he further adds, that New York is one of the dirtiest cities, and Philadelphia full of magazines of provisions, rice, coffee, &c. intersected with drains of water and inlets of the sea, particularly upon the side contiguous to the Delaware, where the disease began to manifest itself. Dr Rush attributed the fever of 1793 to exhalations arising from putrid coffee; and remarked, that all those who came near the place where it was, were first affected. Lastly, in the year 1813, commissioners sent from England were directed to learn the cause of the epidemic in Gibraltar: they determined that it must have arisen from a too crowded population, and from the streets and houses being small, narrow, dirty, and ill ventilated.

After the mature consideration of so many different opinions, supported by facts and observations which during my investigation of this disease I have collected, I am decidedly of opinion that the yellow fever is endemic in those places where marsh miasmata is abundant; where the cleanliness of the harbours and their dependencies, the streets and the houses, is neglected, or improperly attended to;—and I shall here state such reasons as support me in this opinion. It is primarily evinced, and always occurs in the low

marshy ground in America: it has raged frequently in the seaport towns of Cadiz, Gibraltar, Malaga, Carthagená, and Alicant, more than in any other part of the kingdom; and evidently because the stagnant waters, the masses of putrid sea-weed, the drains from the washing-houses and aqueducts, the impurities of the streets, houses, and also of persons, are in those places the causes of its origin and excitement; and will continue to be so, unless the necessary means be employed to stay its progress, and remove these local nuisances.

Besides this, the yellow fever invariably manifests itself from the latter end of August to the month of November; September and October being the period of its most active evincement. This circumstance evidently shows it to be the effect of miasmata, which at that season exhales from the stagnant waters, or from the putrid and fermenting remains which surround the habitations. It is only in the autumn that the effluvia from the putrid and fermented matter prepared by the summer sun exhales from the low grounds, in consequence of the then temperature being more apt to facilitate the process; for in the summer the powerful rays of heat produce the evaporation of the stagnant water, which consists only of the simple disengagement of the water, the

principles of which do not form miasma alone—it being from the evaporation of the remaining muddy proportion of corrupted animal and vegetable matter, that the hurtful febrific miasma is produced. Besides, in the summer season the heated columns of air rise up and fly aloft more than at any other time; so that if they had in suspension any malignant effluvia, it would be transported into the upper regions of the air, and far removed from producing bad effects amongst the neighbouring habitations. And for the same reason, in the winter season, besides that the weakness of the solar heat might cause little to rise from the surface of the earth, the line of congelation being very low, any trifling exhalation which might arise would consolidate and rest in the neighbourhood of its origin. The time, therefore, of the passing of the summer into the winter ought, in consequence, to be the period for the development of febrile miasma.

Another circumstance which renders the autumnal season the generator of miasma, without the intervention of marshes or stagnant waters, is the rain which always falls during that time; and which, resting upon the putrid remains prepared in the summer, spreads around, under the process of its evaporation, the hurtful particles, in the mode already described.

But Dr Mosley imagines, that the fevers produced by such miasma have been very different from the yellow fever, which, according to M. Pugnet, appears at all seasons of the year in the West Indies; and Dr Monson asks, why marsh miasma should rather produce the yellow fever than a remittent or intermittent? It might also be asked, if marsh miasma produces this fever, why did it not appear more early in Europe, to which it appeared to have been brought from America? After a minute consideration of the subject, I think it possible satisfactorily to answer these reasonable demands.

The fevers generally produced from different miasma are, the intermittent, remittent, and synochus—all nervous fevers, that is to say, depending upon a disordered state of the nervous system. This disorder is the result of the hurtful action of the miasma upon the body; but as the nature of this action is not understood, and cannot be demonstrated, it is necessary, in explaining its effects, to recur to such hypothetical reasoning as approaches in likelihood the nearest to probability. Let us suppose that the miasma is a fine poisonous material, diffused in the atmosphere, and floating around the putrid and fermented grounds from whence it springs; the objects which come into contact with this atmosphere

must necessarily become affected; and in a degree more or less, according to their susceptibility. Accordingly, the nature of this action will be different, in proportion as the nature or degree of the miasma may differ, as also its mode of action; because we perceive, that one quantity of stimulus applied suddenly to a part will produce violent effects, whilst the same proportion gradually applied produces but little irritation, and sometimes is not attended with any evident action at all. Nor to any other reasons but these should we attribute the absence of other diseases during the prevalence of the yellow fever, and that it does not regularly develope itself every year. And as the ruddy and vermilion morning foretells the end of a stormy and tempestuous night, so the appearance of remittent, after the fatal permanence of the yellow fever, is a sure indication of the mitigated violence, or change of disposition, in the poisonous miasma which produced it.

In order that the nervous system may rest, evidently disordered by loss of energy, nothing more is required than a particular action to be exerted upon one or other of its communicating sympathetic branches. How this happens is not known, but the experience of every moment demonstrates the fact. The force of a strong odour or effluvia upon the olfactories produces syncope, as we have

observed above; and the smallest drop of narcotic poison produces, in a moment, a depression of the sensitive force of the nerves, which often terminates in death.

To return, therefore, to the yellow fever, which only results from a high degree of affection of the nervous system, and which may very well be produced by endemic miasma, the nature of which, more malignant than usual, exerts its action upon a system prone and susceptible to its influence.

That this fever might not be known in Europe previous to 1764, is also very doubtful, and a circumstance not well ascertained. Dr Mosley supposes it to be the *causus* of Hippocrates; M. Camper, the *morbis niger*; and it is not improbable that it might have been confused frequently under the name of bilious, malignant, or putrid, before Sauvages and other nosologists gave a systematic aspect to the disease.

The purity of the standing waters, and the cleanness of the surrounding grounds, not being always the same, their exhalations will accordingly be sometimes unhealthy, and sometimes not so; and perhaps in 1729, in Carthagera, whilst the season of the year encouraged the production of pestiferous miasma, from the uncleanness and bad state of the stagnant waters, and the dirtiness of the harbour, the Commodore Giustiniani arrived

with his gallies from Saint Martha, just in time to have the blame imputed to him of having imported the yellow fever.

Besides, we have facts which demonstrate that this disease manifests itself spontaneously, where a noxious exhalation is produced without marshes and deficient economy; and it will not be out of place to mention here an example reported by Mr Tytler in 1792. The vessel Busbridge left England with 234 persons on board for the East Indies. On the 26th May, in passing the Equator, they were subjected to heavy rains for several days: not long after, the yellow fever manifested itself in the ship, and was attended with great fatality. To this example we may add, that Dr Chisholm, as we have already noticed, believed that the Bullam fever originated spontaneously on board the Hankey. It appears, therefore, that there can be little doubt as to the endemic nature of this disease, and that its contagious character is a mere assumption, which cannot be verified or supported by facts.

The two great proofs upon which the adopters of this last opinion establish their pretences are the observing, that as soon as one person is attacked by this fever, the rest of the family become shortly subjected also to its influence; and that whoever has once suffered from its visitation, is ever after

exempted from a repetition, although he may live and cohabit with those labouring under it!

When we reflect, that the same miasma which affects one person has equal access to the rest of the family,—that it will pass on and spread itself rapidly in the neighbourhood,—it is obvious that the idea of contagion is unnecessary to account for the consequences. And we have had a thousand examples contrary to the second peculiarity, that persons who had suffered once from the disease, and even twice, died from a third attack! On the contrary, persons who never had the disease at all, have remained unhurt in the midst of an infected population, although visiting and nursing the sick; of which I myself, and many other medical men, are examples, and can testify. It is evident, therefore, that the chief arguments of the contagionists cannot be supported.

It is worth inquiring, however, If a miasma is capable of producing the yellow fever by its peculiar action upon the nervous system, how comes it that the exhalation from a body labouring under the malignancy of the disease is innocuous? And if putrefying animals, as is said, be sufficient to produce a febrific exhalation, there can be little doubt that a similar consequence may result from a body which rapidly passes into dissolution and internal mortification.

It is probably from such a reflection, that Governments have been induced to observe such strict precautions relative to the admission of persons, and of grain, &c. which come from places suspected of the yellow fever—raising lazarettos, and instituting long and strict quarantines. But this circumstance has not been so sufficiently analyzed as to establish its due probability; whilst it is perfectly evident, that fear, more than sound reason or analytic experience, has induced the prevalence of an opinion, which I shall endeavour to refute by a statement of the following reasons.

I do not wish to confine myself to noticing a few facts; but, following the course of my analysis, I find, that from the nature of the disease it cannot be either infectious or contagious, being, as we have already observed, so peculiar, and of a nature so different from contagious ailments, which have always protracted febrile heat and increased perspiration, and which are always marked by an exanthematous eruption,—the very circumstance which, by contact and its great degree of concentration, propagates by infection.

The perspiration and exanthematous eruption are wanting in the yellow fever, and the febrile heat only exists during the first stage; and then the exhalation from a person who a few hours before enjoyed perfect health, in whom the discon-

certed actions of the system have as yet produced no bad effects, and the extent of whose skin, from its dryness, has admitted of no transudation, cannot evidently be hurtful. To this effect many examples might be adduced of soldiers, brought to the military hospital at Gibraltar, whose companions continued to use the same beds upon which they had been lying (often for eight or ten hours) during the first accession of fever, without catching the disease.

In the third stage, the degree of heat necessary to cause an exhalation of the internal corrupted materials is absolutely wanting; so that in this respect it is less dangerous than the common typhus,—because, if the power of medicine succeeds in arresting the progress of dissolution, and great debility of the second stage, the disease will be no more hurtful than that of a common simple remittent.

We are therefore to conclude, with regard to the nature and disposition of the yellow fever, that it is attended with great debility and malignancy, and that it is unusually fatal, but not contagious.

The rigorous quarantines, therefore, which men are subjected to, and merchandize suspected of the yellow fever, ought to be observed with much less severity, more particularly when the crews of vessels are healthy, and no case of suspicious

disease on board. To attach disease to them, and to imagine the possibility of a person carrying about contagious matter upon his person for many days without its manifestation, is an idea which sound reason should not for a moment hesitate to condemn.

The evils which result from quarantine on board of ships, are far more to be dreaded than the simple suspicion of their harbouring the yellow fever. Obligated to remain in ports at anchor, where bad water, unfree ventilation, and the want of due exercise, enervates the body and depresses the spirits, it is much to be feared that disease often manifests itself under such unfavourable circumstances, which might otherwise never have occurred.

PART' II.

————— Quæque ipse miserrima vidi,
Et quorum pars magna fui. ÆN.

PART II.

CHAPTER I.

OBSERVATIONS ON THE CAUSES, PREVENTION, AND CURE OF FEVER, AS IT OCCURS ON THE COASTS OF THE MEDITERRANEAN, AND ON SHIPBOARD.

THE fever which prevailed at Gibraltar in 1804, 1810, 1813, and 1814, and which lately proved so fatal in its effects in 1828, was the same which occasionally prevails in the different towns and along the coasts of the Mediterranean Sea. Its symptoms vary, observing many gradations of intensity, “from the remissions of a more mild biliary disease, or even ephemeral irritation,” to its condensed typhoid state, marked by all the aggravated characteristics essential to a disease rapid in its progress and fatal in its event. During a period of seven years’ observation in places where it is most prevalent, I have noticed its occurrence, and marked the progress of its symptoms to be unvaried in their general nature, and only altered in intensity from some predominant pecu-

liarity of constitution, from the intensity of the exciting cause, or influence of predisposition.

At Gibraltar, Alexandria, Makry, Ephesus, Smyrna, Athens, Napoli Romania, and various towns in the Archipelago, and also from innumerable cases on shipboard, I have observed its prevalence, and marked its identity, as depending upon one series of local endemic causes, of which I shall hereafter take notice.

During the prevalence of this disease, or when at all active, it assumes a continued form, attended with strong primary symptoms of reaction, evincing an inflammatory diathesis, and requiring the most prompt and decisive mode of treatment to insure any thing like a chance of the patient's recovery. It is a species of continued fever, therefore, characterized by great debility, and a speedy tendency in the fluids to putrefaction. All the ordinary symptoms of fever with which it is attended, and the great debility which ensues, evince its typhoid nature, and susceptibility of the individual, more or less, to its fatal influence. But, in proceeding with these observations, I shall state the general symptoms and causes of typhus, and so connect my observations as to identify them with its more moderate and usual form, referred to by Dr Burnet under the denomination of Mediterranean fever,—a disease characterized

by active systematic irritation, and a general tendency to internal inflammatory influence upon the viscera of the head, breast, and abdomen.

Typhus (from *τυφος*, stupor), class *Pyrexia*, ord. *Febres* of Cullen; a species of continued fever, characterized by great prostration of strength, and a putrescent tendency in the fluids, accompanied with the ordinary symptoms of fever. It is to be readily distinguished from the inflammatory, by the smallness of the pulse, and the sudden and great debility which ensues on its first attack; and in its more advanced stage, by the petechiæ, or purple spots, which come out upon various parts of the body, and by the fetid stools which are discharged: and it may be distinguished from an ordinary nervous fever, by the violence of all its symptoms when it first comes on.

When the disease first commences, the patient is seized with languor, dejection of spirits, amazing depression and loss of muscular strength, universal weariness and soreness, pains in the head, back, and extremities, and rigors. The eyes appear full, heavy, and yellowish, and often a little inflamed: the temporal arteries throb violently: the tongue is dry and parched: respiration is commonly laborious, and interrupted with deep sighing. The breath is hot, and offensive; the urine is crude and pale; the body

is costive; and the pulse is usually small, quick, and hard, and now and then fluttering and unequal. Sometimes a great heat, load and pain, is felt at the pit of the stomach, and vomiting of a bilious matter ensues. As the disease advances, the pulse increases in frequency, (beating often from 100 to 130 or 140 in a minute). There is vast debility, a great heat and dryness in the skin,* oppression at the breast, with anxiety, sighing, and moaning. The thirst is greatly increased. The tongue, mouth, lips, and teeth, are covered with a brown or black tenacious fur. The speech is inarticulate, and scarcely intelligible: The patient mutters much, and delirium ensues. The fever continuing to increase in violence, symptoms of putrefaction shew themselves. The breath becomes highly offensive; the urine deposits a black and fetid sediment. The stools are dark, offensive, and pass insensibly. Hæmorrhages issue from the gums, nostrils, mouth, and other parts of the body; livid spots

* I believe that the increased heat in fever cases depends upon the acceleration of the pulse, and that the detraction of blood is the most powerful refrigerant. Nevertheless I witnessed a singular case at China in 1811: A midshipman (Mr Wells) died from an attack of malignant fever, and, several hours after death, the evolution of heat was so conspicuous over the breast, and about the region of the heart, as to impart almost a burning sensation to the hand.

or petechiæ appear on its surface; the pulse intermits and sinks; the extremities grow cold; hiccup ensues; and death at last closes the tragic scene.

When the fever does not terminate fatally, it generally begins, in cold climates, to diminish about the third week, and goes off gradually without any very evident crisis. But in warm climates it is rapid in its progress, and seldom continues so long as two days; and the patient, under malignant attacks, is often carried off in twenty-four hours.—“*La mattina desinarono co' loro parenti, compagni, et amici, che poi la sera regnante oppresso nell' altro mondo cenarono colli loro passati!*”—Bocc.

Our opinion as to the event is to be formed from the degree of violence of the symptoms, particularly after the appearance of petechiæ, although recoveries have taken place under the most unpromising circumstances. An abatement of thirst, and febrile heat—a gentle moisture diffused over the body—loose stools—turbid urine—rising of the pulse—the absence of delirium and stupor—may be regarded in a favourable light.

On the contrary, petechiæ, with dark, offensive, and involuntary discharges by urine and stools,

fetid sweats, hæmorrhages, and hiccup, denote the almost certain dissolution of the patient.

The usual appearances upon dissection are, inflammation of the brain and viscera, but especially of the stomach and intestines, which are now and then found in a gangrenous state, with a similar tendency in the general muscular fibre.

This fever has commonly been esteemed as a contagious complaint, and as produced from the excitement of morbid matter arising from the body of a person labouring under the disease ; and that such influential poison is often conveyed in clothes or merchandise from one place or country to another, in its concentrated and undiminished state of activity. But this is certainly not the case ; for the disease cannot at will be transported from one place to another : its effects will always be found to be equally local with the exciting causes.

It may be observed, however, that where many individuals labouring under a disease of this description are crowded together, and where cleanliness and proper ventilation is not attended to, there can be little doubt, that under such circumstances an atmosphere so corrupt and impure will be generated, as may reproduce the disease in such predisposed persons as happen to come within its influence. In this instance, however,

a local exciting cause is generated, which, under any circumstance, would constitute a nidus for the propagation of malignant fever. When fever of this description becomes general, it is almost invariably produced from effluvia arising from animal or vegetable substances in a state of putrefaction; and hence it is, that in low marshy countries it is apt to be prevalent, when sultry and intense heat succeeds any great inundation. Want of proper cleanliness, and confined air, are likewise causes of the fever. Hence it prevails in hospitals, jails, camps, and on board of ships, especially when such places are much crowded, and the strictest attention is not paid to cleanliness and ventilation. A close state of the atmosphere, with damp weather, is likewise apt to give rise to putrid fever. Those of lax fibres, and who have been weakened by any previous debilitating cause, such as poor diet, long fasting, hard labour, continued want of sleep, &c. &c. are most liable to it.

When a febrile disorder of the preceding description takes place in tropical climates, where unfortunate localities aggravate its symptoms, it assumes the form of, and is denominated *yellow fever*, from the appearance of the patient under the secondary stages of its progress.

In some of the Dutch settlements in the East Indies, in the West Indies, and in various towns on the coast of Spain, the Archipelago and Levant, where the accumulation of animal and vegetable matter in a putrescent state, and exposed to a warm sun, is abundant, the streets dirty, the houses ill ventilated, and the common forms of cleanliness unattended to, it is very evident that fevers under such circumstances must not only become prevalent, but be marked with, and assume appearances of the most aggravated description. And it is notorious, and well ascertained from a series of practical observations, that the yellow fever, which lately proved so fatal at Gibraltar, and occasionally appears in various parts of the Mediterranean, has succeeded to the mild remittent fever which was long ago known to exist in those places, before their population increased, and the exciting local causes became so numerous, formidable, and aggravated.

It is generally that form of continued fever denominated *synochus*, which now and then appears, and sometimes becomes prevalent on shipboard on this station, (Mediterranean), as well as in the West Indies. It is most frequently produced from the air between decks (especially in damp, close, warm weather,) being impure

and confined ; * from the want of personal cleanliness, and the bedding not being properly and frequently aired ; and, when produced, is always aggravated and most fatal in those patients who are addicted to the use of spirituous liquors, or living irregularly.

Fatigue, anxiety of mind, or want of sleep, predisposes much to attacks of this disease in seafaring men. Indeed, every thing which tends to enervate the body may be looked upon as a predisposing cause ; as we find it often arising from great bodily fatigue, and too free an indulgence in sensual pleasures, violent exertions, intemperance in drinking and errors in diet, and now and then from the suppression of the usual evacuations.

Certain passions of the mind, such as fear, grief, joy, have been said to produce this disease in solitary instances ; and I have known some cases where such causes appeared to have had an influence in its occurrence ; but in all probability some other concurring circumstance is necessary to form the type of the disease. In camps, jails, and on board of ship, however, it almost

* The air has an extraordinary influence on the human body, in reference to health and sickness ; since we see that a man may live two or three days without aliment, but can scarce subsist a moment without air, so necessary is it to the life of every animal.—Hippoc. de Flatib. p. 296. l. 50.

invariably arises from a corrupted state of the atmosphere.

The effluvia arising from the animal body, if long confined in one place, without being diffused in the atmosphere, will, it is well known, acquire a singular degree of virulence, and, if applied to the bodies of men, become the cause of fever. Marshy and moist grounds, acted upon by heat for any length of time, usually send forth exhalations, which, in tropical climates, form a never-failing source of disease.

Various opinions have been held forth with regard to the proximate cause of fever; but there can be little doubt that some noxious, poisonous, læsive or hurtful matter, applied to the sentient extremities of the nerves, or through the agency of the absorbent system influencing the nervous system, and diminishing the energy of the brain, becomes the primary cause; and to prevent the fatal influence of this application, a general cessation or diminution of the exhalant and secretory vessels takes place, as necessary to precede that secondary consequence in which the heart and arteries are unusually excited,—an effort, in all likelihood, which has for its object the restoration of the influence of the nervous system, and the removal of the noxious matter by an effusion of sweat.

We perceive, in cases of fever, that there is a general cessation or diminution of the action of the extreme vessels upon the surface of the body : their excretions are suppressed, the external bulk of the body is shrunk and diminished, while the excretories generally are in some measure stopped up ; “ perspiration is diminished, thirst prevails, the alvine evacuations are at a stand, and the secretion of urine almost suppressed.”

Without adopting altogether the former hypothesis, that fever may be viewed as the therapeutical agent of the *vis medicatrix naturæ*, we know that the preservative powers of the system are always excited by the approach of danger, and that nature has recourse to every plan to ward off and to counteract the effects of its encroachment ;—I may be permitted, therefore, to imagine, that these more immediate preceding symptoms are salutary gradations, or links, in that scale or chain of consequences which occur between the influence of the morbid matter upon the nervous system, and the ultimate exertion of the heart and arteries to accomplish its removal.

“ Upon the whole,” says Dr Cullen, “ our doctrine of fever is implicitly this :—“ Certain sedative powers applied to the nervous system, diminishing thus the energy of the brain, effect a depression of its influence on the system, but at the same

time act as an indirect stimulus to the heart and arteries, which are roused into action, and continue to act till they have had the effect of restoring the energy of the brain, and of extending its influence to the extreme parts of the body ; which is generally evinced by an effusion of sweat, and an alleviation of all the symptoms," as we see in intermittent and remittent fevers. In continued fevers of the more aggravated form, this salutary solution is not so evident, or does not take place, probably in consequence of the intensity of the exciting cause, and the immediate and great prostration of muscular strength over the body ; in cases of typhus or synochus, the pyrexial action only wears out the strength of the patient, and induces rapid and fatal debility.

I may finally observe in this place, that all causes which produce debility, impair the system, or reduce the healthy actions of the body, *predispose* or render the individual liable to attacks of fever, more especially of typhus, the symptoms of which are always aggravated in proportion to the preceding debility ; thus rendering more active the *remote* or *exciting cause*, viz. attenuated noxious matter, either combined with or otherwise suspended in the atmosphere, giving it a hurtful disposition with regard to animal life, which, being applied to the surface of the body, or otherwise,

induces the more prominent events of reduced nervous energy, venous congestion, diminished secretion, and retention of the usual evacuations. These circumstances, when attended by the two prominent symptoms of increased heat of body and increased action of the sanguiferous system, constitute the chief phenomena of fever.

In Smyrna, Alexandria, Romania, and various other towns in the Levant, when warm weather succeeds to the wintry or autumnal rains, and chiefly in spring, malignant fevers are of constant occurrence, aggravated in their form, and very fatal. The low situations of these places, the want of a proper circulation of air, with several other unfortunate localities, have an irresistible influence in producing these disorders, from the usual bilious remittent to its modification under the more concentrated typhoid form. We generally perceive, too, that there is a want of proper elevation in the construction of the habitations in those places, and that they are in consequence not exposed to so free a circulation of air as might be proper; that the consequent high degree of temperature (*vide* Meteor. Diary) cannot but be conducive to the formation of febrile matter, and also aggravate whatever predisposition the exposed individual may have to its influence.

As a proof of the advantage which a certain

degree of elevation affords against the influence of febrific miasma, I witnessed a beautiful but unfortunate elucidation of this circumstance at Napoli di Romania in 1825 and 1826; and there the phenomenon, if under similar circumstances, may be annually observed. Modifications of bilious remittent fever become prevalent here in autumn and spring, and also in winter, and often observe in their symptoms the characteristics of yellow fever. In the months of February and March 1826, a malignant typhoid fever prevailed in the whole of the lower part of the town, which is nearly upon a level with the bay, or inlets of water, which in many places stagnate there, and also in other parts of the town, where the streets are narrow, the houses crowded, and the population numerous. Of the lower parts of the houses so situated, scarcely one was exempt from febrile disease; and the better sort of the people, perfectly aware of the advantages of an elevated site, inhabited only, if possible, the upper floors or apartments of the buildings, where they seldom failed to escape the disease. The particular circumstance, however, to which I wish to allude, relates to about four or five thousand poor people, chiefly old men, women, and children, who took refuge under the walls of Napoli from the brutal barbarity of the Turks,

who were then massacring indiscriminately the peaceful inhabitants of the surrounding country. They fled from their houses, but being, from political motives, denied admittance within the walls of the town, reared to themselves temporary huts of mud round the upper and back parts of the fortifications; and there, under the greatest mental dejection, poverty, and nakedness, remained free from the ravages of the disease which spread amongst the inhabitants of the town. The only diversity in the locality of their residence, which could be adduced as the cause of such exemption, was, that the situation where these poor outcasts had constructed their hovels, possessed an elevation of three or four hundred feet above the inhabited part of the town.

In referring to the predisposing causes of febrile disorders, more particularly amongst seafaring men, I may briefly repeat a remark from my journal for 1826, alluding to the healthy state of his Majesty's vessels in the Mediterranean, when they happen to return from a cruise for the purpose of victualling or refitting at Malta. On board of the ship (*Gannet*) to which I was attached, and during a period of eight or ten months, scarcely a case of any importance presented itself, unless a few ailments of a diarrhoeal nature, induced probably from the too free use of

the fruits of the climate, from occasional change of diet, or from the quality of the water being sometimes incorrect;* but principally from cold or wetness† affecting the extreme vessels upon the surface of the body, and deranging the functions of the liver,‡ &c. &c.; nor, during the space of thirty-one days which we remained under quarantine, did a single case of disease occur. But mark the consequences (*vide* Diary, from 15th August to 24th September) which succeeded our removal to the inner harbour, when a certain number of the men were permitted to go on

* Durantes, enumerating the qualities of good water, says,—

Sic aqua clara fluat, qualis nitidissimus aër,
 Dulcis, et exigui ponderis, et gelida;
 Et tenuis currat, nullo purissima limo,
 Sitque sapor nullus, sit procul omnis odor.
 Frigescat breviter, modico simul igne calescat
 Utilis, et duris apta leguminibus.
*Hanc mihi si quis aquam dederit, vinosa valete
 Pocula, nam vincit optima lympa merum.*

† Hippocrates, though he admonishes people to accustom themselves gradually to a cooler diet, as the spring grows warm, yet never advises them to lay aside any of their winter garments at that time; whereas in autumn he expressly orders them to guard against the approaching cold by thick clothing. In climates where the vicissitudes of weather are frequent, we should never lay aside any of our winter clothing before the month of May, nor even then, unless the weather should be uniformly warm.

Sydenham observes, that the giddy practice of throwing aside our winter clothing too early in the spring, and of exposing our bodies, when overheated, to sudden colds, has destroyed more than famine, pestilence, and sword. *De Feb. Intercur.* § 4.

‡ Dr Johnston.

shore by way of leave; where, by indulging in those propensities to which sailors are too prone, a number of febrile irritations ensued, and, with other ailments, continued to manifest themselves during the whole time the vessel remained in harbour. Violent passions of the mind, and immoderate use of spirituous and intoxicating liquors, produce an exhaustion of the *vis vitæ* proportioned to the extent of their previous application: This diminution of nervous energy predisposes quickly to the noxious influence of sedative application upon the body, and induces fevers, often aggravated in their form, and attended with much fatality.

In jails, camps, and where there is excessive population, the great requisites in preventing disease and promoting health, consist in a proper attention to dryness, cleanliness, and ventilation: and a circumstance which tends to the prevention of prevalent fever on board of ships, more than any particular of her economy in tropical climates, is the frequent cleaning out of the vessel's hold, which ought to be done as often as the nature of the public service may permit. In smaller vessels, (contract built), I am informed that a communicating channel in the bottom of the limbers does not always exist, or is in most ships confined in extent, and inconvenient to keep free: Under such circumstances, therefore, the water which is thrown

into the vessel's bottom, (a most improper practice), for the purpose of sweetening her or otherwise, cannot act for want of a free circulation, but to a certain extent will always remain, in the form of cess-pools, between the interstices of the beams on each side of the keelstone. There also the impurities of the hold subside, and soon form a mass of matter highly capable of emitting noxious and putrid exhalations; and thus forms, as it were, a nidus of exciting effluvia, ready to act upon the first predisposed habit which presents itself. And such predispositions are of too frequent occurrence on shipboard, when from depressing passions of the mind, the fatigues of a laborious profession, and the consequence of irregularities too common to seamen, a reduction of nervous excitement is induced, which renders their bodies highly susceptible of being acted upon by those poisonous emanations. Thus, those solitary cases of bad fever which we now and then have, are produced, and become more or less prevalent, as the general health of the ship's company may or may not be correct. To prevent this, therefore, the hold should be occasionally cleaned completely out, at least every six months, if abroad in tropical climates; the interstices in the bottom forming the limbers should be sponged out; the whole swept, white-washed, dried, and ventilated, before the provi-

sions are again replaced. Such was the economy of the last vessel to which I was attached ; and to it I in a great measure attribute the almost total exemption we were favoured with from febrile disorders of malignancy. The other departments of the vessel's economy should be equally correct and prudent : all moveables upon the lower decks ought, during the warm and dry seasons of the weather, to be brought above and washed twice a-week, and a circulation of fresh air constantly kept up. A matter of chief importance also is, that of whitewashing now and then over the beams and walls of the ship where the men sleep. This tends to wholesomeness as much as any thing ;—it absorbs the moist and animal emanations, and by the antiseptic property of the lime every thing like putrescency is completely prevented.

The bedding of seamen, which I have seen too often neglected, demands much attention. Their hammocks, which often serve as receptacles for their dirty clothes and linen, along with their mattresses, wetted with profuse perspiration, lashed firmly up, and exposed to the sun in the netting, cannot but create a noxious vapour, and often, it is probable, generate infectious fevers where many men are stowed together, and the season or climate is productive of disease. When the bedding therefore is stowed, no hammock cloth should

be put over them in fine weather, especially painted ones, in order that they may be freely exposed to the breeze; and at least twice a-week the bedding of all hands should be shaken out, and well aired upon the deck—the neglect of which I have often observed to produce the worst effects, as the least inattention to personal cleanliness and comfort, in situations where febrile disorders become prevalent, not only tends to generate disease in common, but especially to aggravate fevers. The attention of the public medical attendant must not be alone confined to the sick strictly so speaking; convalescents, and men lately discharged from the sick list, and supernumeraries, are inclined to neglect that attention which is necessary to common cleanliness, in not washing, shaving, or changing regularly their linens. It will be imperative upon him to represent all such causes of disease, and point out the most proper and convenient means to insure the health and comfort of every individual.

Excess and irregularity in the conduct of seamen causes at least two-thirds of those ailments and accidents with which they are visited. Almost every bad case of febrile irritation which I have met with on shipboard, has pretty generally been, in some way or other, connected with those causes, or the immediate result of drunken-

ness and excess committed while on shore ; and unless when vessels are necessitated to put into harbour for repair, or other unavoidable purpose, nothing in the form of general disease occurs. During the few days we remained at Malta, in May 1826, fifteen or twenty men were put upon the sick list, and several of them received wounds or bruises from quarrelling and fighting on shore.

It is not altogether, however, the immediate consequences of those irregularities which the men commit while on shore in foreign parts, that the medical attendant has to dread. The immoral seaman, by his irregularity, fixes upon himself a fatal predisposition to disease, which, in particular constitutions, time will hardly remove ;—and on foreign stations, where prevalent fevers of the most unfavourable description are of daily occurrence, he not only runs great risk of being attacked with such complaints when they are least expected, but his constitution being broken down from intemperance, and debilitated by habitual excess, can neither resist the activity of disease, nor support those salutary efforts which are essential to restoration. Deaths under such circumstances are frequent and unavoidable ; and I am satisfied, that a similar result will be deduced from the observations of every medical practitioner of experience and observation serving upon this

station ; namely, that vessels returning after a protracted cruise from the Adriatic, Archipelago, or Levant, generally arrive at Malta with little or nothing of prevalent sickness on board ; but if they take pratique, and the men have liberty to go on shore, (which is often granted, for two or three days at a time, to a third, and not unfrequently to one-half of a vessel's crew), it invariably happens, that on leaving the harbour, instead of the ship's company being complete and effective, (independent of such as may have been left in the hospital), a distressing proportion is added to the sick list, while an unfortunate predisposition to tropical disease is evidently stamped upon such individuals as may have been the victims of habitual excess.

In the course of my service in the Levant we were frequently stationed at Alexandria, and often remained in harbour for several weeks at a time, during what is called the unhealthy season of the year, without experiencing any thing like the occurrence of a febrile case, beyond those of an ephemeral nature. Indeed, I look upon the air and climate in the neighbourhood of that place to be any thing but bad or unhealthy in itself ;— it is only from the sensuality and indolence of the inhabitants of those regions, where the air is infected with the consequences of their wretched

domestic and local economy, that prevalent disease can, in my opinion, to any great extent present itself.

Mr Madden, whose acquaintance I had the pleasure of forming while at Alexandria, makes an ingenious remark, relative to the local causes which produce or aggravate pestilential disease in some of the Turkish towns, in his late curious and interesting work. His opinions relative to the nature of the plague, and the mode of cure which he proposes, I should feel disposed to adopt and employ; but I regret extremely, that I had but little opportunity of personally investigating its nature, or identifying it as a more virulent form of typhus (*gravissimus*), modified from the intensity of exciting causes, and peculiarity of constitution. The following interesting fact, however, which occurred at Malvasea, a fortification in the Gulf of Napoli, seems to prove the extent to which disease may be modified by peculiarity of constitution. In 1823 the majority of the inmates of this place died, from the plague having broke out in the garrison. The whole of the Turks who were seized with the complaint had bubos, carbuncles, and well marked external symptoms of glandular disease; while the Greeks, amongst whom the malady proved equally fatal, died under the apparent influence of malignant

typhus ! They had, generally speaking, no external characteristic swelling. In all probability, however, had their bodies been examined by dissection after death, carbuncles would have been found affecting internal glandular structure, in a degree not less conspicuous than that which was externally evinced in the persons of the Turks.

But it does not appear consistent, either with philosophy or with fact, to suppose that contagious febrile disorders are naturally endemic to the shores of the Mediterranean. Generally speaking, they are placed beneath a pure and equable sky, amidst a fresh exhilarating air ; and the soil, by its light and general fertility, neither exhausts the physical powers with want, nor oppresses them with satiety. The country supplies from its internal treasures the most grateful materials of wealth and of art ;—the varied scenery is not loaded with the majesty of woods, but beautified with the unrivalled luxuriance of flowers and shrubs ;—and, in continual view of the *Ægean's* bright waters and ever-changing waves, its inhabitants receive from nature all the appliances imaginable, to refine, expand, and stimulate the animal machine to health, and diffuse through all its susceptibilities one pervading spirit of vivacity. (*Vide Diary.*)

The labour and operations of man not only im-

prove and embellish the earth, but render it more wholesome and friendly to life. When any region lies neglected and destitute of cultivation, the air stagnates in the woods, putrid exhalations arise from the waters, the surface of the earth, loaded with rank vegetation, feels not the purifying influence of the sun or of the wind, the malignity of the climate increases, and new maladies, no less noxious, are engendered. Accordingly, all the provinces of America, when first discovered, were found to be remarkably unhealthy. This the Spaniards* experienced in every expedition into the new world, whether for the purpose of conquest or settlement; and all succeeding European settlements, down to the present day, endeavouring to establish themselves abroad, in countries less civilized, and little cultivated, have from time to time been visited with disease, more or less prevalent, aggravated, and fatal. And although the Spaniards, by the natural constitution of their bodies, their habitual temperance, and the persevering vigour of their minds, were as much formed as any people in Europe for active service in a sultry climate, they felt severely the fatal and pernicious qualities of those uncultivated regions through which they marched, or where they en-

* Robertson's History of America.

deavoured to place colonies. Great numbers were cut off by the unknown and violent diseases with which they were infected: such as survived the destructive rage of these maladies, were not exempted from the noxious influence of the climate; but in the same manner as we daily see our friends and relations at present, they returned to Europe feeble, emaciated, with languid looks, and complexions of such a sickly yellow colour, as indicated the unwholesome temperature of the countries where they had resided.

I shall here give, under the head of a separate chapter, the opinions entertained relative to the nature and causes of the fever which has repeatedly prevailed at Gibraltar. Several eminent medical officers, formerly stationed there, as well as the commissioners sent to investigate its nature, afforded communications of a tendency nearly the same. The local causes of disease which are mentioned in these quotations have been mostly verified by my own observations, as existing in many of the towns in the Levant, and islands of the Archipelago; and amongst such professional men as I have met with abroad, no great diversity of opinion prevailed in reference to the endemic nature of the fever which they excite.

CHAPTER II.

OF THE GIBRALTAR FEVER.*

“FROM a careful and minute examination of the sick, in the town, and military hospital of Gibraltar, I find that the fever which prevails there is exactly the same as the yellow fever of the West Indies, in every characteristic symptom of

* Every person who has visited Gibraltar within these late years, even the most fastidious, must admit that General Don has accomplished every thing that ingenuity and good taste could effect, in laying out all the waste ground in and about the garrison in a manner the most ornamental and healthful. But there are circumstances connected with the civil Spanish population, that it is impossible altogether to obviate; and the late political state of that unfortunate country, must have presented many a suffering individual as a claimant for protection and residence within the town.

I must further observe here, that the following notices relative to the local causes of febrile occurrence in the town and garrison of that place, were stated a considerable number of years previous to this date, and at a time when the prevalent fever of the place first attracted the notice of the authorities: they have been long ago remedied as far as possible, and are only referred to here, to show the decided opinion which was held relative to their influence in producing disease.

the disease, as well as in the appearance of the body upon dissection after death.

“ Having recently returned from the West Indies, where I was engaged for four years in very responsible duty, as principal medical officer of the islands of Martinique and Guadeloupe, and in charge of the general hospital of Barbadoes, this disease must necessarily have become familiar to me in every shape and form in which it presents itself: I am able therefore confidently to assert, that it is precisely the same kind of fever which has raged here during the years 1804, 1810, 1813, and 1814. It appears at different times and seasons, with various degrees of severity, sometimes as a mild remittent, at others in its most concentrated degree, to which the term *yellow fever* is applied; and often all the intermediate gradations may be viewed in the hospital at the same time in different patients.

“ In many cases it runs very rapidly into its second stage, with all its worst symptoms; such as great prostration of strength, a dark yellow suffusion over the surface of the body, and a constant vomiting of a dark-coloured fluid. From the great difference observed, in point of severity, between the most mild and most severe or aggravated degree, an idea was for a long time entertained that they constituted two distinct kinds

of fever: the first, a bilious remittent, produced by marshy and putrid exhalations from decayed vegetable and animal matter; the latter, the yellow fever, a disease *sui generis* and contagious.

“ This question has been very amply discussed by various authors; but the experience of late years has decided the controversy with almost all professional men of observation and intelligence, placed in a situation where the disease could be viewed on an extensive scale, who now very generally coincide in opinion, that the yellow fever is a very severe degree of the bilious remittent, produced by the same exciting causes, and *not contagious*. This idea has led to a very opposite and more successful mode of treatment than was formerly pursued, by which the *mortality* in our West India colonies has been of late years very considerably diminished. Physicians and surgeons, engaged in civil and military practice in the West Indies, are so much satisfied upon this head, that the discussion of its contagious or non-contagious nature is scarcely ever agitated. Sir George Beckwell, late commander of the forces, (whose attention to the sick soldiers was always remarkable), visited every hospital once a fortnight; spoke to every man in the wards; and I have seen the beds closely surrounded by his staff, viewing patients with the

black vomit, the worst and most fatal symptom, without any individual having the least notion that it could be communicated to him, either by contagion or infection. Indeed, every military officer enters an hospital there with as little apprehension as he does his own quarters,—a convincing proof, that only one opinion prevails, upon this subject, where the disease is best known. If proofs were wanting to substantiate its non-contagious nature, they could be readily furnished at Gibraltar ; it being universally admitted that the disease cannot be communicated to any person out of the town ;—that families now residing on the neutral ground receive their friends or visitors from town, perfectly confident that they can receive no infection from them ;—that persons taken ill in town have been nursed on the neutral ground, without giving the disease to any of their family or attendants. Some men, also, of Dillon's regiment, took the fever from the town into the encampment in the neutral ground, and remained there during their illness, without its spreading to any other person in the camp. In like manner, the vessels in the Bay received cases from the town in its worst form, and no instance has been known of their communicating it by contagion or infection ; and it may be remarked, that the cabin of a ship is the most likely place for a contagious

disease to manifest itself. All these facts are acknowledged by every person here ; and I would beg to ask, If it be admitted that we cannot, by any possible means devised, export the disease, how are we to attach any credit to the story of its importation ? Indeed, its recurrence at only one particular season, when the same disease appears in all warm climates in its worst form, should alone make the thing highly improbable ; for it must be extremely difficult to imagine it was introduced with such regularity in the same months of the years 1804, 1810, 1813, and 1814.

“ It has been much insisted on, as a particular mark of the disease in Gibraltar, that it never appears a second time in the same person. This is certainly a very extraordinary property, and very different from the experience of other situations. Many persons, however, have assured me they had the fever a second time ; but their statements are discredited by those who wish to establish this peculiarity. I can adduce a proof of a second attack—a man now dangerously ill in the naval hospital—David Blair, private soldier in the twenty-sixth regiment, who is acknowledged to have had the same disease last year by every medical officer ; and several cases are mentioned, by some surgeons and assistants, to have come under their notice during the present season. When a

person arrives first in the West Indies, he is not considered as safe till he has had the fever; and then he is considered to be seasoned for the climate. But this, although a kind of security, does not amount to a total exemption, for I have known men die even of a *third attack*.

“ The town of Gibraltar is situated on the western side of a mountain,* whose elevation is about fourteen hundred feet above the level of the sea, completely obstructing all easterly winds; so that the air in town, during their continuance, is nearly stagnant, except when at intervals sudden gusts or eddies come round from the southern and northern extremities of the rock. The weather is usually hot and dry during seven or eight months of the year,—the thermometer ranging from 80 to 88 and 90° of Fahrenheit: exhalations, therefore, from any animal or vegetable substances allowed to remain on the surface of the earth, must accumulate from the want of a free and proper circulation of air, until they acquire a very extensive power of action in producing disease.

* Those cities which are situated towards the west, and are so covered from the east that the winds from that point have no access to blow away their noxious vapours, must of necessity be unhealthy, and their inhabitants subject to many and bad distempers. Hippoc. de Aër Loc. et Aq., p. 283. lin. 12.; Edit. Fœslii.

“Long before local causes multiplied to their present number, a bilious remittent fever was experienced in Gibraltar, particularly in the months of September, October, and November,—caused, no doubt, by the effluvia exhaled from the soil, and decayed vegetation washed down from the mountain. This was of so mild a nature, and so little known as fatal, as not to attract public attention; but as materials for more abundant exhalations increased, it appeared in a more aggravated degree, and at length assumed the form of the genuine yellow fever;—for it is well established, that in all situations where the temperature rises above 80° of Fahrenheit, with marshy or uncultivated ground, or decayed vegetable or animal substances, to be acted upon by a high degree of heat, similar diseases may be universally witnessed. It is my decided opinion, that the fever which has committed such ravages in Gibraltar is the bilious remittent, known here for many years in its mild form, but aggravated to its present fatal degree of concentration, to which the term *yellow fever* is applied, by the action of more powerful causes;—that it is an endemic disease, and not contagious!”

As the local causes which the author of these remarks proceeds to enumerate, will be found to exist in one degree or another, and under certain

modifications, where prevalent fevers of the above description evince themselves; and as I have witnessed their direct influence in exciting disease in most of the modern Greek towns, and particularly in those on the Spanish coast, I cannot do better than continue his observations on that head.

“ These local causes are,—*First*, Too crowded a population. *Second*, The defective state of the drains and sewers, inadequate, from their narrowness and ill construction, to carry off the filth accumulated by this excessive population. *Third*, The extremities of the sewers, not being carried sufficiently far into the sea, empty themselves on the beach, where the noxious substances are exposed until carried off by the spring-tides. *Fourth*, The impurities of the whole town resting in the cess-pools, drains, and sewers, during the hot and dry months of the year, no artificial means being as yet contrived for cleaning them out. *Fifth*, The slaughter-house not being carried sufficiently far into the sea, putrid substances collect upon the beach, requiring high tides to be effectually washed away. *Sixth*, The British limits being very small, ground for building on is excessively dear; a number of sheds or huts are therefore constructed, so close to each other, and in such a manner as to preclude the possibility of a free ventilation. *Seventh*, The privies having

no communication with the drains or sewers, become extremely offensive in the poorer habitations before they employ night-men to carry off and throw their contents over the line wall, where they remain with other offensive matters.

“ The drains and sewers were made (it is farther observed) at a time when Gibraltar had not one-third of its present population, and when it was resolved upon by the authorities of the place, and his Majesty’s government at home, that the town should not extend beyond certain definite limits, nor the inhabitants ever exceed 7000 civilians; and it is highly probable, that if this regulation had been adhered to, there can be little doubt that much of the sickness and mortality which has prevailed of late years would not have occurred. The sewers are of a square form, and without a sufficient inclination,—none of them measure more than four and a half to two feet in width, and about eighteen inches in height. In a great proportion of houses cess-pools are established, where filth is constantly deposited, until, rising to a certain height on a level with the drains, the thinner parts run off, and the gross subside and become putrid. The cess-pools were formed, it appears, as a kind of relief to the sewers, which otherwise would be speedily choked up; but, notwithstanding this expedient, they

often burst open into the streets. By the existence of the causes above enumerated, the air of respiration becomes loaded with a noxious exhalation, arising from various putrid animal and vegetable substances, particularly after rains, which commence here about the month of September; and in a crowded confined town, where from the construction of the sheds or huts all free ventilation is obstructed, must acquire a degree of power and intensity sufficient to produce disease in its worst form, without having recourse to the idea of foreign induction or contagion. But the opinion of contagion being so thoroughly adopted, local causes, as militating against that doctrine, appear to have been surprisingly overlooked, or not properly examined. There are those, however, who assert, that no nuisance of any kind, or other local cause of disease, exists in Gibraltar—contrary to the combined testimony of every person residing there; shewing how far the mind may be influenced, even to the exclusion of plain demonstrable truth, in endeavouring to establish a favourite hypothesis, which we often believe to be incontrovertible, because, with unconscious partiality, we exaggerate the importance of every argument which tends to support it, and neglect or distrust every fact with which it is incompatible.”

Such were the observations of a highly respectable medical gentleman ; and it is impossible for the generality of Europeans to conceive to what an extent local causes of disease are permitted to accumulate in many of the Levantine towns. The exciting causes of fever are constantly on the wing, more or less intense as circumstances may concur ; and in those countries where, from the nature of the government, the state of the climate, and constitution of the inhabitants, an unfortunate and too general predisposition daily manifests itself, it would be a matter of the greatest astonishment if prevalent diseases were not incessantly occurring, as the natural scourge of ignorance, superstition, indolence, and filth.

PART III.

PART III.

CHAPTER I.

REMARKS ON THE EFFICACY OF BLEEDING AND CALOMEL IN CONTINUED FEVER.

I HAVE already observed, that the reaction of the system, which constitutes one of the chief phenomena of fever, and which is evidently intended by nature as a salutary effort for the restoration of health, does only, in most cases of continued fever, wear out the strength of the patient, and induce rapid and fatal debility. In cases of intermittent and remittent fevers, we do indeed see something like a happy temporary solution, as the apparent and immediate consequence of this effort of the heart and arteries; but in that form of disease of which we have been treating, critical solution, resulting to systematic reaction, is seldom or never met with, and has never been entertained as a practical consequence by any experienced person.

As the reaction of the system, therefore, which takes place in typhus and synochus, especially in warm climates, only tends to wear out the patient

and promote dissolution, this consequence, as soon as the nature of the disease is ascertained, should be instantly checked by a bleeding proportioned to the strength of the patient, but more particularly according to the urgency or violence of the symptoms: it quickly relieves the distressing and stupifying headach, softens the pulse, and induces a general perspiration over the body. These consequences will succeed to the bleeding in a great majority of cases; and, during all my service in the Mediterranean, (including a period of seven years), the result was favourable in some hundreds of cases which came under my observation; but where the constitution is unsound, or the complaint succeeds to intoxication, or makes its appearance in constitutions reduced by habitual excess, the patient has little or no chance of recovery.*

While surgeon of the San Juan, receiving ship at Gibraltar, in 1814, I had a considerable number of cases of a very aggravated kind. Three of the men, who contracted their complaints while on shore, and under the influence of intoxication, died. One of my patients, (a man of the name

* Sunt enim, qui ab ipso ortu adeo improspere corporis sunt statu, ut ne, si *Æsculapium* quidem iis præfeceris, vel sexagesimum annum videant.—*Gal. de San. lib. 1. cap. 12.* Toma Linacro, Anglo. Interp.

of Hastings), who was reported to have had the same fever the year before, recovered from a severe attack, although he was affected with the worst and most fatal symptom, black vomit. They were, however, the only patients which I ever lost from active fever in the Mediterranean, and I may also add, in the public service, where I happened to have the entire management of the case.

Unless syncope is induced, seldom less than twenty ounces of blood should be taken away at a time, and repeated if the headach is not immediately relieved, and the frequency and force of the pulse reduced ; putting five or six grains of calomel, and two or three of pulvis antimonialis upon the tongue, washing it down with a little gruel three times a-day, and continuing it with diluents, until, from the state of the pulse, the fetor of the breath, or irritation of the mouth, its effects upon the system become obvious. I look upon calomel to be the great curative in cases of the above description ; because the bleeding only stays the reaction of the system, and prevents debility and inflammation, but can have no direct action over the morbidic exciting cause. By relaxing the extreme vessels, however, it may promote the removal of the sedative matter, when the excretory powers of the calomel and antimony begin

to operate. If the reaction of the system can be sufficiently checked, and mercurial irritation induced before obvious debility ensues, the safety of the patient is secured, all the disagreeable symptoms subside, and he is quickly in a state of convalescence.

The reaction of the system being kept within bounds by the detraction of blood, and the further influence of the sedative exciting cause checked, partly from the removal of the cutaneous constriction, aided by the tendency to diaphoresis which the blood-letting promotes, the poisonous application or influence producing the force is, as it were, neutralized in its operation, and thrown off by the excretory influence of the calomel and antimony with diluents; while at the same time the mercury, in instituting its own peculiar and specific irritation over the whole body, and thus finally superseding the diseased action, furnishes a complete barrier to the further invasion of the system. The calomel is to be so administered as to excite as speedily as possible a moderate and continued action of the absorbents. By this means the tone of the nervous system will be quickly restored, the blood most effectually freed from its impurities, and the internal organs from morbid obstructions; and the various excretions or emunctories of the body being excited

by the same means, the system will be finally relieved from their noxious influence. The purgative effect of calomel is of vital importance in the early stages of continued fever;—its indication in this respect must be promoted by suitable remedies, and the free use of bland diluents. The alimentary canal becomes extensively diseased, and produces great irritation, from the effects of the diseased bile thrown out from the morbid biliary organs: it must therefore become an object the most important and primary, to keep the intestines as free as possible from the irritable matter which constantly loads them,—to excite and keep up a continued action in the hepatic organs, and if possible restore them to a healthy state of secretion. Calomel as a purgative, therefore, is to be preferred before all others, as it not only evacuates the bowels, but, by imparting a peculiar and specific irritation to the diseased organs, has a wonderful effect in restoring their lost tone and diminished energy.

It is here, however, imperative upon me to remark, that the above mode of treatment, (however efficacious it may be if had recourse to in due time, and in such fevers as I allude to on their early attack), proves dangerous and fatal if employed when the disease has established itself, and symptoms of debility have commenced. The utility of

such interference is then lost, and all we can do for the patient is, to assist the more tardy operations of nature, and with time and patience endeavour, if possible, to bring the malady to a favourable issue. I will here briefly notice the usual symptoms which characterize the disease on its first attack, and when the utility of a correct mode of proceeding can tend to insure the life of the patient.

As soon as the paroxysm of the disease is indicated by the patient's complaining of a violent and stupifying pain across the forehead, with a full throbbing pulse, and peculiar white tongue, (just as if it had a coating of common white paint); the eyes having a full, dim, glassy look, and more or less inflamed, and feeling painful within the orbits when pressed upon; the skin being found dry, and the urine and stools suppressed in their usual evacuations; at this time there being seldom much irritability of stomach, or great heat of skin;—under the above state of symptoms, and stage of the disease, our interference to accomplish a cure will be found most opportune. It is a moment the neglect of which costs many a life, for it is only under the above circumstances that the curative plan (of blood-letting, and the proper use of calomel) can be adopted, or prove at all decisively useful in its result; for in a very short interval of time the pulse loses its fulness, becomes small,

quick and irregular, and the heat of skin and thirst more urgent, with anxiety, and a painful oppression about the pit of the stomach. The irritability of that organ increases all the patient's distress. The vomiting is almost incessant, first of a bilious matter, and ultimately of a dark, thick, grumous matter, commonly called black vomit, and generally looked upon as a fatal symptom; the breathing becomes oppressed, the breath fetid, the countenance sallow, dark, and cadaverous; strong symptoms of putrescency take place, with delirium, stupor, insensibility, and death. It must be obvious, therefore, that to encroach upon the limits of such a disease as this, under almost any modification of its secondary form, with any other than a palliative medical treatment, must evince a conduct irrational and inhuman, and insure consequences almost uniformly fatal.

We so often meet with strange and unusual modifications, and such striking deviations from the ordinary process of febrile action, that those who have seen much of its severe character, will be least sanguine in the employment of any one unvarying or unerring mode of conduct as to its treatment. Dr Clark, in a small tract which he published at Smyrna in 1826, mentions a series of unusual symptoms as characteristic of the fever

which he had met with there: it is a type of the disease which is equally new to me; but as tending to corroborate the above remarks, I will subjoin the case which he mentions in his observations.

“*Case.*—A gentleman who had been for a considerable time employed in antiquarian research amongst the islands of the Archipelago, and on the coast of Asia Minor, arrived here on the evening of 25th August 1825. He had been indisposed, and confined to bed for several days, and had taken a laxative medicine the preceding evening. I found him labouring under considerable depression of spirits and restlessness: his pulse was quick and feeble; his skin of nearly natural heat; he was thirsty and anxious; yet he made no particular complaint, and there were no prominent or urgent symptoms in the case. His mind was therefore tranquillized as much as possible, and I prescribed for him a camphorated saline mixture, with ten grains of calomel at bed-time. 26th, His pulse had gained considerably in strength, and his skin was moderately warm; his bowels had been acted upon by the calomel, and he felt altogether more comfortable than on the preceding day: his tongue was moist, thirst was moderate, and he had some hours of refreshing sleep. A powder, composed of pulv. Jacobi, grs. ii. calomel, grs. iii.

pulv. tragacanth co. grs. iv. was administered every four hours, and he was left at night better in every respect, and in no unpromising condition. Shortly afterwards, however, the algid symptoms appeared, and on being called, I found him pulseless and cold. There were still some faint remains of warmth in the axillæ; but these quickly disappeared, and the whole body soon communicated to the hand a peculiarly repulsive sensation of cold. No pulse could be perceived in the crural, temporal, or carotid arteries, nor in the region of the heart was any action perceptible; yet to my questions he replied that he felt comfortable, and complained only of thirst: his stomach continued retentive, and his bowels were readily relieved by a stimulating enema. A blister was now applied to each leg, a very large one to the epigastric region: stimulating frictions and bottles filled with hot water were applied to different parts of the body; sinapisms were placed on the soles of the feet and on the thighs. He took six grains of the sub. carb. ammoniæ, combined with opium, every three hours, together with a strong decoction of bark and valerian, in doses of two ounces every hour. Notwithstanding an assiduous application of these means, however, he was found, on the morning of the 27th, with scarcely any increase of heat; and several hours elapsed

before the pulse was distinguishable at the wrist. About two P. M. the pulse and heat were both restored; the former being much accelerated. The tongue now became dry and parched, its edges and apex being exceedingly red and fiery. He complained of sensibility on pressure over the epigastrium; thirst became more urgent, the bowels were relaxed and irritable, and the pulse rose to 100. Under these circumstances, 18 ounces of blood were abstracted from the arm, by which he was decidedly relieved in every respect. The decoction of bark had been exchanged in the morning for an oily demulcent mixture and mucilaginous fluids, calculated to sooth the now excited mucous membranes of the bowels. The sub. carb. ammon. had been omitted, and, in consequence of headach, a blister was applied to the nape of the neck. About seven in the morning, a sudden reduction of temperature took place, which continued the whole of the night, but unaccompanied by shivering or the slightest sensation of cold, and did not diminish until eleven o'clock A. M. of the following day. The same means were employed as during the former paroxysm;—the succeeding excitement was much more moderate, and he passed the day more composedly than the preceding one. The cold stage returned about six o'clock P. M. but subsided early in the

morning of the 29th. He had little increase of heat during the day, and the algid symptoms returned at a later hour; they were, however, less intense, and of shorter continuance. He was now able to continue the decoction of bark every two hours; no preternatural increase of heat followed, and the frigid symptoms returned no more. He was removed to apartments on shore on the 2d September; and, continuing the decoction of bark a few days longer, his recovery was uninterrupted and complete."

A want of practical knowledge on the part of medical men, in not marking that line of demarcation which should warrant or not their active interference with the disease, has, I am satisfied, been the chief cause of such diversity of opinion as has always prevailed relative to the propriety of extensive bleeding in continued fever, and stamped a timidity and lingering resolution upon the conduct of inexperienced practitioners, which is at once ruinous to its utility, and overpoweringly prejudicial in its consequences to the medical beginner. A late assistant of mine, (Mr D. Bivan), an ingenious and diligent young man, was strongly averse to using the lancet in cases of continued fever; but his mind was open to conviction, and he was soon impressed with the proofs of its decided useful-

ness. It is to be lamented, however, that such conviction must be felt, or rather forced upon the mind, from actual observance of its utility alone, and therefore acquired at the expense of much suffering and death; for until distress has repeatedly accumulated around the juvenile medical practitioner, and the feeble remedies of too general use have proved unavailing, and left him about to abandon the hope of usefulness from any given plan, he then, and not till then, under the conviction that things cannot be worse, resolves to place his last hopes upon a depletory system, and thereby opens up to himself a field of practical satisfaction, upon which he establishes his future usefulness and humanity, and becomes a correct and proper guide to inexperienced youth.

During considerable experience in the Mediterranean, I had ample opportunity of treating the fever described by Dr Burnet in all its forms. In 1814, while surgeon of H. M. ship *San Juan*, (receiving hulk at Gibraltar), I had under my care a number of cases of the fever then prevalent in the place, and several of them of the worst description. My success in their treatment was rather satisfactory than otherwise, and gained me the creditable testimony and confidence of those under my care.

In remarks addressed to the Commissioners of H. M. Navy, relative to my mode of treatment in the Mediterranean in 1826, I concluded with the following observations :—“ The generality of the men on board appeared to be possessed of constitutions naturally good, and not reduced from long previous excess. The recoveries from febrile attacks have in consequence been speedy ; and from the success of the mode of treatment which was adopted, I did not require to send a single case to the hospital. The uniform practice which experience has established in the cure of the Mediterranean fever, is to check or moderate the reaction of the system by the speedy detraction of blood, repeated and proportioned to the urgency of the symptoms, the strength of the patient, and state of constitution, but with guarded reference to the duration of the disease ; because, if the complaint has established itself, and symptoms of debility come on, our only hope of benefit must then rest in relieving the occasional symptoms, and patiently endeavouring to conduct the disease to a happy though protracted issue. Calomel, when given freely, combined with small proportions of antimony, and aided by proper diluents, promotes the general excretions of the body, opens the bowels freely, and determines towards a regular and uniform diaphoresis. The

diseased action, under such circumstances, is quickly superseded, and the return of the patient to his duty takes place sooner or later, in proportion as early recourse may have been directed to the evacuating plan of bleeding and purging, with prudent hand, or sparing and timid negligence.

“ Experience teaches us to place every confidence in the specific effects of calomel upon the system. I always congratulated myself when I observed its general influence upon the body to be obvious, and never hesitated to give a favourable prognosis; and I conclude by observing, that when the constitution is otherwise sound,—when application for medical assistance has been made in due time,—but above all, when the habit has not been predisposed from intoxication and excess, very few cases of the prevalent fever of this station ought to terminate unfavourably,” provided that proper attention be paid to the simple, but very effectual mode of treatment laid down by Dr Burnet, in his useful book upon Mediterranean Fever.

CHAPTER II.

CASES ILLUSTRATIVE OF THE EFFICACY OF BLEEDING AND CALOMEL IN CONTINUED FEVER.

CASE I.

WILLIAM J——s, æt. 34, marine, at Malta, 8th September 1826 ;—succeeding to excess, irregularity and drunkenness, while on shore. He complains this morning of pain across the forehead, pain of back and loins, with weakness of limbs : the countenance is rather turgid, and his eyes inflamed, and painful within the orbits when pressed upon ;—tongue white, bowels rather slow than otherwise, pulse not quick but firm and thready, skin hot, excretions diminished, not much thirst : V. S. ad $\frac{3}{4}$ xx., et hab. Calomelanos, grs. vi. Pulv. Jalapæ, grs. xv. c. diluentibus. Vesp. About mid-day pulse became more full, with increased headach and heat of skin, and he was bled again to $\frac{3}{4}$ xx. ; which produced towards the evening a remission of his complaints, with profuse perspiration and several stools : his pulse full, soft, and

about 90 or 86 : Hab. hora somni, Sol. Ant. $\frac{3}{4}$ i., c. Tart. Ant. gr. $\frac{1}{4}$., Nit. Potassæ, grs. x. 9th, Has considerable vertigo when he attempts to rise from bed ; pulse moderate, pain of head gone, febrile heat by no means urgent, and was purged once or twice in the night ; tongue becoming more clean, skin moist : Hab. Tart. Ant. gr. $\frac{1}{4}$., Nit. Potass. grs. x., ter in die c. diluentibus. Stools, which were dark, fetid, and bilious, are becoming more natural. 10th, Pyrexia gone, no pain of head, back, or loins ; pulse about 70, and natural ; skin moist, tongue more clean, and complains chiefly of vertigo and general debility ; goes to stool now and then, but evacuations are scanty : Hab. Sulph. Mag. $\frac{3}{4}$ ss., Infus. Sennæ, $\frac{3}{4}$ ij., et rep. dum alvus fluat. 11th, Is convalescent : Hab. Infus. Cort. Aurant. $\frac{3}{4}$ ij. ter die. 12th, Remains convalescent : Rep. Infus. Cort. Aurant. $\frac{3}{4}$ ij. ut antea. This patient continued gradually to regain strength till the 24th of September, when he returned to his duty.

CASE II.

REES J——s, seaman, æt. 23, at Malta, 11th August 1826. He was discharged from the sick list a few days ago, cured of an inflammatory affection of knee :—last night he was seized with an active attack of pyrexia, having symptoms such

as occur in the cold stage of an intermittent : he appeared much dejected, and his pulse was small, quick, and contracted. I gave him Tinct. Opii, gtts. l., Spirit. Ætheris Nitrosi, gtts. lx. Reaction succeeded soon after taking the medicine, attended with profuse diaphoresis ; and this morning he feels considerably better, pulse 90, and rather hard, skin hot, tongue very white, with a dull pain across the forehead ; eyes have a watery look, and when pressed upon, a deep painful sensation is felt at the bottom of the orbits, with an inflamed appearance of adnata ;—he has considerable thirst, and bowels costive : V. S. ad $\frac{3}{4}$ xii. et hab. Pulv. Calomel. grs. v., Pulv. Antimonialis, grs. iij. ter in die, cum diluentibus blandis tepidis ad libitum. 12th, Syncope was induced from bleeding, and the blood taken away exhibited slight signs of inflammation. Has had only once passage in his bowels since yesterday ; his pulse, however, is natural, and the generality of pyrexial symptoms are gone ; debility alone, with a peculiar whiteness of the tongue, remains : Hab. Inf. Gentianæ, $\frac{3}{4}$ i., Calomel. grs. ij. ter die. 13th, Bowels freely opened since yesterday ; says he is getting well ;—more generous diet, with a sparing allowance of wine : Rep. Inf. Gentianæ, $\frac{3}{4}$ i. ter die, sed intermittatur Calomelas. He remained in a state of

convalescence, and went to his duty on the 15th of the month.

CASE III.

BAT. H——N, seaman, æt. 27, at Vourla, 4th July 1826, has languor, lassitude, and debility, with pain of head, back, and loins: his countenance is unusually dejected, with thirst, heat of surface, and pulse upwards of 90, not very full, but hard and thready;—bowels frequently purged: Fiat. V. S. ad $\frac{3}{4}$ xii. which produced syncope and free general diaphoresis; Rep. Mist. Salin. $\frac{3}{4}$ i. ter die, c. aq. hordei pro potu, et appl. emplast. Lyttæ ad tempora. Vesp. Pain of head has been much relieved since the bleeding and application of blisters;—the pulse has been more moderate, and a pretty free perspiration kept up: Rep. Mist. Salina ter die. 5th, Is better, tongue clean and moist, thirst moderate, general pyrexial irritation reduced, and his bowels are now in a favourable state; pain of head, back and loins, gone: Rep. Mist. Salin. ter in die; moderate diet. 6th, Appears to be doing well, and complains principally of debility: Hab. Inf. Gentianæ, c. Gum. Opii, gr. $\frac{1}{4}$. ter die; moderate diet. 7th, He remained in a state of convalescence, and continued to do well till the 12th, when he returned to his duty.

CASE IV.

R. J——, æt. 29, seaman, at Alexandria, 26th November 1826, was discharged from the sick list a few days ago, cured of a catarrhal ailment. He complained last night of severe pain of head, chiefly affecting the sinciput, and had pain of back and loins: his eyes were inflamed and painful when pressed upon, skin hot, pulse upwards of 90, full, but not very hard; some thirst; tongue not much altered, rather moist and clean; knows no cause for his complaint, which came on with occasional shivering; is a very good, sober young man. He was bled to $\frac{3}{4}$ xii., which produced syncope; he is rather better to-day, and slept a little during the night; pulse about 90, but otherwise natural; had one stool in the night; headach continues, with heat of skin, and thirst: Rep. Calomel. gr. vi. Pulv. Jalap. gr. v. aq. hordei ad libitum, pro potu. Vesp. General and profuse perspiration during the day, and was purged four or five times from the physic; pulse of natural strength and firmness, and between 80 and 90; skin cool, and generally moist; pain of head much better, tongue moist but white: upon the whole feels himself better; took a few spoonsfull of soup and a little fruit-tart in the evening; thirst not urgent: Hab. Haust. Salin. Ammoniæ, h. s.

aq. hord. p. p. 27th, Remains pretty free from febrile irritation this morning, but has still a dull pain across the forehead, and his pulse is rather firm and hard; bowels open, skin moist, tongue more clean: Rep. V. S. ad $\frac{3}{4}$ xii. et hab. Haust. Salin. Ammon. quarta q. q. hora. 28th, Pulse still firm and rather quick; blood taken away had no unusual appearance; complains of no particular pain, has considerable vertigo, and his bowels rather costive: Admoveantur emplastra vesicatoria temporibus, et Hab. Inf. Sennæ, $\frac{3}{4}$ i. c. Sulph. Mag. $\frac{3}{4}$ ij. q. q. hora dum alvus fluat. 29th, Blisters rose upon the temples; pulse natural in strength and frequency; bowels open, skin cool, tongue moist and clean; has no systematic irritation, and he says he is much better; has some natural appetite, and feels disposed to sleep: Hab. Haust. Salin. Ammon. ter die. 30th, Appears convalescent to-day; pulse and state of bowels regular, and heat of skin natural: Rep. Haust. Salin. ut a. 1st December, Is gradually mending, bowels rather slow: Hab. Pulv. Jal. Comp. $\frac{3}{4}$ ss. 3d, Remains convalescent: Hab. Mist. Nitros. pro placebo. This patient continued to do well, getting rapidly stout, and returned to his duty 11th December.

CASE V.

JOHN G——, seaman, æt. 29, at Napoli di Romania, 21st January 1826, has severe pain across the forehead, and particularly felt at the bottom of the orbits when the eye-balls are pressed upon; pain at the pit of the stomach, attended with sickness, vertigo, and an inclination to vomit, with much eructation of wind: his countenance is pale and dejected; tongue clean and moist; bowels rather open; and his pulse is very full, but not above 60; febrile heat not urgent, and his skin rather soft: He is a stout young man, of an excellent character, and attributes his complaint to cold and wetness: V. S. ad $\frac{3}{4}$ xviii.; R. Cal. gr. viii., Pulv. Ant. gr. v. Vesp. Pain of head, back, and loins, severe; no pain of stomach; thirst and febrile heat not urgent; pulse not much above the natural standard and frequency, but still full; skin moist, and has had two stools since the morning: Hab. Mist. Nitros. c. Ant. hor. somni, c. diluentibus; sickness and vomiting relieved. 22d, Complains of languor and debility, with pain of loins; his headach is gone, and also the vertigo and inclination to vomit; has had several stools; skin moist; pulse about 88, and soft: Hab. Pulv. Nitri, gr. v., Tart. Ant. gr. i. ter die, c. diluentibus. 23d, Has no com-

plaint, unless pain of back and loins ; pulse natural, bowels open ; secretions not much interrupted, and has no febrile irritation : Cont. Mist. Nit. c. Ant. ut a. He remained in a state of convalescence, without any untoward occurrence till the 31st, when he returned to his duty.

CASE VI.

ISAAC M——, seaman, æt. 24, at Smyrna, 22d March 1826, has violent pain of head, with febrile heat ; pulse 96, and full ; tongue white ; bowels costive ; excretions diminished ; the eyes are somewhat inflamed, and the countenance flushed ;—complaints succeeded to wetness and fatigue, while employed on a watering party : Fiat. V. S. ad $\frac{3}{4}$ xx. R. Calomel. gr. v., Pulv. Antimonialis, gr. iij. c. diluentibus blandis tepidis, et rep. ter die. Merid. Pain of head severe ; face flushed ; pulse 98 and hard ; skin hot and rather dry ; no passage of bowels : Rep. V. S. ad $\frac{3}{4}$ xvij. et app. emplast. Lyttæ ad tempora ; Rep. Pil. c. Calomel. et Ant. ut a. 23d, Pulse about 80, of natural strength, and heat of surface reduced ; tongue more natural in appearance, and he is not so thirsty ; blisters rose well, and his headach is better ; had only one stool in the night ; no general perspiration : Rep. Pulv. Jal. Comp. 5 i. 24th, Had his purgative powder repeated yester-

day, with occasional small doses of Infusum Sennæ c. Sulph. Mag., and his bowels have been freely opened: his appetite is mending, and general untoward symptoms much relieved: he had a free and general perspiration in the night; tongue more natural and moist, thirst reduced, and pulse about 80: Rep. Nit. Potass. gr. x., Tart. Ant. gr. i. ter die; very moderate diet. 25th, Took Calomel. gr. vi., Pulv. Ant. gr. iij., last night, and has been twice purged in consequence; skin today is natural, moist, and cool; pulse about 70, calm and soft; tongue clean, appetite moderate; was able to get out of bed for a little, and feels himself much better: Rep. Tart. Ant. c. Nit. Potass. u. a. 26th, Is convalescent, but has considerable debility: Hab. Infus. Gentian. $\frac{3}{4}$ i., Pulv. Zingiberis, gr. x. ter die. 27th, Rep. Mist. ut a. He continued to do well, and returned to his duty on the 3d of April.

CASE VII.

THOMAS A——N, æt. 31, at Malta, 10th October 1827, has pains of head, back, and loins; countenance flushed, eyes inflamed, skin hot, pulse full, and about 90; tongue rather dry, bowels slow, with constant thirst: does not know any cause for his complaints, but has been employed in cleaning out the ship's hold these two

days past. He is a man of bad constitution, and of irregular habits, as to using tobacco and spirits : V. S. ad $\frac{3}{4}$ x. et hab. Pulv. Jal. C. $\frac{3}{4}$ i. c. diluentibus. Merid. Headach was somewhat relieved from the bleeding, and had one stool from the physic ; he is, however, little better ; much thirst, with hot skin, and the perspiration, though sometimes free, is not constant ; slight syncope from the bleeding, which had no inflammatory appearance : Rep. V. S. ad $\frac{3}{4}$ xv. c. Calomel. gr. v., Pulv. Ant. gr. iij., c. diluentibus blandis tepidis. Vesp. Has no pain of head ; pulse, however, full, and about 88 ; skin hot, tongue a little furred, bowels freely open, much thirst ; Rep. V. S. ad $\frac{3}{4}$ x. ; blood taken away at mid-day evinced the inflammatory aspect ; has drowsiness and apathy : Hab. Mist. Salin. Ammon. $\frac{3}{4}$ i. 11th, Does not complain of headach, but has considerable drowsiness and apathy ; severe pains of loins, and across the shoulders and arms ; pulse about 90, and still firm ; skin only occasionally moist ; thirst ; tongue a little brownish, but not parched ; bowels open ; took a little panado in the morning ; blood taken away last night was free from the appearance of inflammation : Admoveantur emplastra vesicatoria temporibus, et Hab. Calomel. gr. ij., Pulv. Ant. gr. iij., 4ta q. q. hora, c. diluentibus. Merid. Pulse 120 ; skin hot, but generally moist ; tongue ra-

ther parched ; thirst continued ; considerable apathy ; has no pain unless in his arms ; continue Pil. Calomel, ut a. ; blisters have not risen. Vesp. Pulse a little more moderate, but rather more full, is still upwards of 100 ; skin hot, perspiration not general ; no appetite, tongue foul, and brownish in the middle ; teeth a little sordid ; has gone frequently to stool this morning, but has passed little or nothing ; vomited a quantity of bile several times in the afternoon, and complains much of pains in his arms, back, and loins : Rep. Mist. Salin. c. Calom. ; the antimonial powder to be omitted. 12th, No pain of head ; apathy not so obvious ; blisters dressed ; tongue more moist and not so loaded ; passed much bilious matter by stool ; irritation of stomach not so troublesome ; took a little panado for breakfast ; pulse about 100, soft, and easily compressed ; skin soft, and by no means so hot as yesterday ; is still, however, in a low state of febrile irritation : took Ol. Ricini, ʒ ij. this morning, which was rejected ; Hab. Calomel. gr. iv., Ext. Aloes, c. Colocynth. gr. v. statim c. diluentibus ; constant drowsiness. Merid. Has pains and general soreness over the whole body when he attempts to move ; has no headach, and is quite sensible ; pulse a little full and hard, and about 112 ; skin hot, but not a burning heat, and the surface is rather soft and moist :

has still considerable thirst; tongue moist and more clean, but has had no passage in his bowels since last physic: Hab. Mist. Salin. Ammon. c. Camphor. gr. i. 3tia q. q. hora. Vespere, Had one free stool about eight o'clock; low febrile irritation still urgent; pulse about 112, firm and regular, with very profuse diaphoresis: Rep. Haust. Salin. Ammon. c. Camphor. et diluent. 13th, Has no headach, but pains over all his body; his mind is composed and undisturbed; pulse 120, firm and regular; skin hot, and perspiration in the night, although not profuse, has been more general; constant thirst; tongue more clean and moist; no appetite; has passed little or nothing by stool since last night: Rep. Mist. Salin. c. Calomel et Camphor. u. a. gr. i. 3tia q. q. hora. Merid. Remains much the same; pulse not so quick, but rather more full; no stool; took a little sago, and also a little chicken soup: Hab. Ext. Aloes c. Colocynth. gr. x. Vesp. Has had several copious dark-coloured feculent stools, which relieved him much; took a little tea, and felt better; mouth evidently sore from the irritation of the calomel: Rep. Mist. Salin. ut a. 14th, Pulse 116, and a little more feeble than yesterday; skin still affected with febrile heat, and rather clammy: he makes no particular complaint; was somewhat incoherent and delirious in the

night; tongue rather foul and loaded; thirst a little more moderate; no appetite; App. empl. Lyttæ nuchæ; the head to be shaved, and to continue the saline mixture, with a small proportion of antimony, every three hours. 15th, Blister rose, and he complains much of it; mouth evidently sore; low febrile irritation still continues; tongue foul and loaded towards the root and middle, but moist; some appetite; several stools, thin, feculent, and smelling badly; pulse goes firm and regular; skin soft and clammy; thirst not so urgent; has much drowsiness; slept none during the night, and had low delirium: Rep. Mist. Salin. $\frac{3}{4}$ i., c. Camphor. gr. ij. ter die, c. diluentibus. 16th, Continued low delirium; much prostration of strength; sallow cadaverous look; pulse 92, soft, compressible, and regular; skin cool, clammy; tongue more clean and moist, not much fetor of breath or stools: Rep. Mist. Salin. c. Camphor. gr. iij., Ext. Hyosciami, gr. ij. 3tia q. q. hor. Vesp. Had several thin stools; wandering and unsettled state of mind; took a little sago and wine, and also a little fowl; pulse 90, soft and regular; skin cool, and at present profusely moist; thirst not quite so urgent; tongue more clean and moist; is weakly, reduced, and evidently in a dangerous state: Hab. Mist. Salin. $\frac{3}{4}$ i. c. Tinct. Opii, gtts. xl., Calomel. gr. iv.; blisters

to be repeated on the temples: has slept none these three nights past. 17th, Not much better; still incoherent in his ideas; blisters have risen, and the discharge very yellow; one stool; no appetite, much debility; look cadaverous; tongue, however, uncommonly clean and moist; pulse 90, and regular; skin cool: Hab. Ext. Aloes, c. Colocynth. scr. i. diluent. et rep. Mist. Salin. c. Camphor. gr. iii. 3tia q. q. hor.; slept none last night, and still very restless. 18th, Had two copious stools this morning; was restless and unsettled in the night; skin generally moist and cool; thirst moderate; pulse about 60, and regular; appetite returning; tongue natural; mouth sore from the calomel: Rep. Mist. Salin. c. Camphor. gr. ij. 3tia q. q. hora. 19th, Has slept continually since yesterday; no complaint, unless much debility; has had three or four stools this morning, and one in the night, not very fetid; tongue, pulse, and state of skin favourable; no thirst; appetite improving; took a little sago and wine, with a small allowance of roast fowl, yesterday evening. He continued to do well, and was able to do a little duty about the latter end of November.

All the cases of fever contained in my public journals present a result pretty similar to those

above quoted, so that any further repetition may be unnecessary. Febrile ailments, however, will, as I have before noticed, be found to present themselves daily, to which no particular mode of treatment will apply; but the appearance of such cases, whether altered from the type of the disease, the patient's constitution, or otherwise, will, from the symptoms, dictate to ordinary experience such plan of cure as may be reasonably expected to benefit the patient. I will now only add the following indications, as a plan of cure in the fever which we most frequently meet with abroad, along the shores of the Mediterranean Sea, &c. and on board of ship,—synochus and typhus.

1st, To prevent or diminish reaction of the heart and larger arteries by means of general blood-letting, repeated and proportioned to the urgency of the symptoms, age, strength, and state of constitution of the patient, and force and frequency of the pulse, but with a guarded reference to the duration of the disease.

2d, To excite and keep up a moderate increased action of the absorbents,—to restore the lost energy of the nervous system,—to promote the expulsion of morbid secretions, or suppressed excretions, from the alimentary canal, and restore the cutaneous action by means of calomel.

3d, To prevent or remove the effects of con-

gestion, or determinations of blood from the head, thorax, and abdominal viscera, by means of local bleeding, sinapisms, rubefacients, and blisters.

4th, To obviate ultimate debility, and its consequences, by the general or occasional use of wine, Peruvian bark, colombo, quassia, snake-root, ether, nutritious diet, &c.

5th, Occasionally, or generally, to sooth the internal surface of the intestinal canal, by using the almond emulsion, decoctions of rice, barley, chamomile, &c.

6th, Avoid all secondary, exciting, or irritating causes,—by strict attention to cleanliness, proper ventilation, exact diet, and a diligent attention to the due administration of the proper remedies.

7th, The irritability of the stomach may be best quieted by means of opium, camphor, anodynes ; and when the vomiting is attended with deep or severe pain, rubefacients and blisters must be applied to the pit of the stomach.

8th, In cases of retention of urine, diuretics, enemas, fomentations to the pubes, semicupium, pediluvia ; but cream of tartar dissolved in water, and taken freely, with the use of the Sp. *Ætheris Nit.* will be found the most valuable and effectual remedies.

9th, Pain afflicting several of the joints of the body, often creates much distress, and may be removed or mitigated from the use of Tinc. Sap. c. Opio; Liniment, Camph. lin. Valat. Rum and olive oil I have often found a most excellent remedy.

10th, The suppression of urine is an unfortunate occurrence, and cannot be remedied: To prevent it, the administration of the same means as are recommended in retention, is sometimes found useful.

11th, For the black vomit, which appears in the latter stages of malignant fever, many unsuccessful remedies have been tried. In all cases, the appearance of this terrible symptom, as well as petechiæ, marking a dissolution of the blood, is to be regarded as almost infallibly announcing the approach of death.

APPENDIX.

A SERIES OF METEOROLOGICAL TABLES, SHEWING THE MEDIUM TEMPERATURE AND GENERAL STATE OF THE WEATHER THROUGHOUT THE ARCHIPELAGO AND LEVANT, IN THE YEARS 1825, 1826, 1827, & 1828.

DURANTES gives a concise and lively description of the air which a man should chuse to live in.

Si cupis incolumen vitam producere, cœlum
Effuge corruptum nebulis, nidore, lacunis;
Quidque movit madidus morboris Africus auris.
Purum ama, et ad solem nascentem, et lumine apricum,
Purgatumque Euro, et Boreali frigore tersum.

NOTE.

The following Diary is written in a manner apparently desultory; but this is to give a general view of the climate throughout the Mediterranean, and has a material tendency to show, that epidemic or contagious fevers cannot naturally be produced along its shores.—In the various places where I noted down these observations on board of ship, the thermometer might probably range four, five, or six degrees higher on shore.

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|----------|------|--|----------------|
| 1825. | | | | | |
| July 1. At Sea, off Elba | 76 | | fair | 1st, Dry, beautiful serene weather. | |
| 2. At Civita Veechia | 79 | | do. | 2d, Beautiful serene weather, but very warm, air dry. | |
| 3. Do. | 80 | | do. | 3d, Beautiful serene weather, air dry. | |
| 4. Do. | 76 | | do. | 4th, Beautiful serene weather, air warm and dry. | |
| 5. Do. | 76 | | do. | 5th, Strong breezes, air, however, warm, dry, and sky serene. | |
| 6. Do. | 74 | | do. | 6th, Weather exceedingly fine, but oppressively warm. | |
| 7. Do. | 74 | | do. | 7th, Heavy showers in the night, and towards the morning. | |
| 8. At Sea | 74 | | do. | 8th, Air damp and loaded, but otherwise agreeable. | |
| 9. Do. | 74 | | do. | 9th, Strong westerly winds, day more agreeable than yesterday, air dry. | |
| 10. Do. | 76 | | do. | 10th, Very fine agreeable weather, air dry, cool, sky serene. | |
| 11. Do. | 74 | | do. | 11th, Weather very fine, but rather warm, atmosphere dry, sky serene. | |
| 12. At Malta | 84 | some r. | do. | 12th, Weather exceedingly pleasant, serene sky. | |
| 13. Do. | 76 | | fair | 13th, Warm oppressive atmosphere, serene sky. | |
| 14. Do. | 80 | | do. | 14th, Weather warm, and still oppressive, otherwise agreeable. | |
| 15. Do. | 76 | heavy r. | do. | 15th, Heavy rain, with thunder, atmosphere warm, sultry, and elose. | |
| 16. Do. | 76 | | fair | 16th, Sky rather dull and clouded, otherwise agreeable, and moderately warm. | |
| 17. Do. | 80 | | do. | 17th, Weather very hot and oppressive, sky clear, serene, and beautiful. | |
| 18. Do. | 78 | | do. | 18th, Exceedingly warm and oppressive, sky clear, serene, and beautiful. | |
| 19. At Sea | 68 | | do. | 19th, Atmosphere very warm and oppressive, otherwise fine weather. | |
| 20. Do. | 68 | | do. | 20th, Weather very warm and oppressive, otherwise most beautiful. | |
| 21. Do. | 76 | | do. | 21st, Weather very oppressive, air rather damp and loaded. | |
| 22. Do. | 76 | | do. | 22d, Weather has been much more refreshing and agreeable to-day. | |
| 23. Off Milo | 78 | | do. | 23d, Weather very agreeable, and comparatively cool, atmosphere more dry. | |
| 24. Off Napoli Romania | 87 | | do. | 24th, Weather warm and sultry, air dry, and otherwise agreeable. | |
| 25. Do. | 80 | | do. | 25th, Exceedingly hot, but otherwise most beautiful weather, air dry. | |
| 26. Off Hydra | 80 | | do. | 26th, Warm, hot, oppressive weather, air dry, sky clear, serene. | |
| 27. Do. | 80 | | do. | 27th, Weather very warm, otherwise pleasant and beautiful. | |
| 28. Do. | 80 | | do. | 28th, Weather very warm, otherwise pleasant and beautiful, air dry. | |
| 29. Do. | 80 | | do. | 29th, Cool breezes, air dry, weather extremely pleasant. | |
| 30. Off Napoli Romania | 80 | | do. | 30th, Atmosphere dry, sky clear, cloudless and serene, but very warm. | |
| 31. Do. | 80 | | do. | 31st, Atmosphere dry, sky clear, cloudless and serene, very warm. | Not prevalent. |

| Not prevalent. | | | |
|--|----|------|-----|
| <p>The weather during the whole of this month was serene and unchangeable.</p> | | | |
| 1825. | | | |
| Aug. 1. At Hydra | 86 | fair | do. |
| 2. Napoli Romania | 86 | do. | do. |
| 3. Do. | 86 | do. | do. |
| 4. Do. | 86 | do. | do. |
| 5. At Hydra | 86 | do. | do. |
| 6. Do. | 84 | do. | do. |
| 7. Off Poros | 82 | do. | do. |
| 8. At Sea | 80 | do. | do. |
| 9. Off Milo | 78 | do. | do. |
| 10. At Sea | 78 | do. | do. |
| 11. Off Cerigo | 80 | do. | do. |
| 12. At Sea | 80 | do. | do. |
| 13. Do. | 80 | do. | do. |
| 14. At Paros | 78 | do. | do. |
| 15. Do. | 78 | do. | do. |
| 16. Do. | 78 | do. | do. |
| 17. Do. | 82 | do. | do. |
| 18. At Sea | 82 | do. | do. |
| 19. At Delos | 80 | do. | do. |
| 20. At Sea | 80 | do. | do. |
| 21. At Milo | 82 | do. | do. |
| 22. At Sea | 80 | do. | do. |
| 23. Off Cerigo | 88 | do. | do. |
| 24. At Sea | 76 | do. | do. |
| 25. Do. | 76 | do. | do. |
| 26. Do. | 76 | do. | do. |
| 27. Do. | 80 | do. | do. |
| 28. Napoli Romania | 80 | do. | do. |
| 29. At Sea | 83 | do. | do. |
| 30. At Hydra | 80 | do. | do. |
| 31. Do. | 82 | do. | do. |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------|----------|------|---|--------|
| 1825. | | | | | |
| Sept. 1. At Hydra | 78 | rain | | 1st, Weather tempestuous, dull, thick, clouded and damp atmosphere. | |
| 2. At Sea | 74 | | fair | 2d, Cold, heavy tempestuous weather, moist atmosphere. | |
| 3. Do. | 78 | | do. | 3d, Weather more warm and agreeable, air mild but moist. | |
| 4. At Samos | 76 | | do. | 4th, Weather cool, rather tempestuous, air more dry and clear. | |
| 5. Do. | 74 | | do. | 5th, Cool agreeable weather, air in the day-time apparently dry. | |
| 6. Off Scio | 74 | | do. | 6th, Cool agreeable weather, air rather clouded and hazy. | |
| 7. At Tenedos | 75 | | do. | 7th, Fine cool agreeable weather, serene beautiful sky, heavy dews at night. | |
| 8. Do. | 75 | | do. | 8th, Fine cool agreeable weather, sky serene, air dry, dews at night. | |
| 9. Off Mitylene | 74 | | do. | 9th, Fine moderate agreeable weather, sky clear, heavy dews at night. | |
| 10. At Sea | 75 | | do. | 10th, Occasional fresh breezes, weather very agreeable, air dry in the day. | |
| 11. Do. | 72 | | do. | 11th, Moderately cool and agreeable weather, sky serene, air dry in the day. | |
| 12. Do. | 72 | | do. | 12th, Weather tempestuous, air damp, hazy, dews heavy in the night. | |
| 13. Do. | 76 | | do. | 13th, Beautiful serene weather, with gentle breezes, dews at night less. | |
| 14. Do. | 76 | | do. | 14th, Beautiful serene weather, gentle breezes, slight dews at night. | |
| 15. At Egina | 76 | | do. | 15th, Serene fine weather. | |
| 16. Do. | 74 | | do. | 16th, Weather exceedingly agreeable, air dry, serene. | |
| 17. At Athens | 74 | heavy r. | | 17th, Heavy showers, high winds, thunder and lightning, mild obscure clouded sky. | |
| 18. At Sea | 74 | some r. | | 18th, Occasional heavy showers, with intervening fine weather, sky obscure. | |
| 19. Do. | 76 | | fair | 19th, Weather much more moderate and agreeable, sky clear, atmosphere dry. | |
| 20. Napoli Romania | 76 | | do. | 20th, Weather very agreeable, air serene, dry, night clear. | |
| 21. Do. | 74 | | do. | 21st, Weather very fine, sky serene, heavy dews at night. | |
| 22. | | | | 22d, | |
| 23. | | | | 23d, | |
| 24. | | | | 24th, | |
| 25. | | | | 25th, | |
| 26. | | | | 26th, | |
| 27. | | | | 27th, | |
| 28. | | | | 28th, | |
| 29. | | | | 29th, | |
| 30. | | | | 30th, | |
| | | | | Employed upon particular duty. | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 1825. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Time when, and place where. | Med. Tem. Fahr. | Wet | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|---------|------|--|--------|
| 1825. | | | | | |
| Nov. 1. At Sea | 64 | | fair | 1st, Weather most agreeable, sky clear, serene, cloudless. | |
| 2. Do. | 70 | | do. | 2d, Weather rather oppressive, otherwise agreeable, sky clear, air dry. | |
| 3. At Alexandria | 70 | | do. | 3d, Weather oppressive, clear, serene sky. | |
| 4. Do. | 70 | | do. | 4th, Warm weather, clear serene atmosphere, sky beautiful. | |
| 5. Do. | 70 | | do. | 5th, Pleasant weather, atmosphere clear, serene, beautiful. | |
| 6. Do. | 70 | | do. | 6th, Weather still pleasant and beautiful, air dry, sky clear and serene. | |
| 7. Do. | 70 | | do. | 7th, Weather rather warm, but pleasant and agreeable, air dry. | |
| 8. Do. | 72 | | do. | 8th, Warm oppressive weather. | |
| 9. Do. | 76 | | do. | 9th, Serene beautiful weather, with refreshing breezes. | |
| 10. Do. | 76 | rain | | 10th, Fresh breezes with some rain. | |
| 11. Do. | 70 | | fair | 11th, Weather exceedingly pleasant and agreeable, obscure clouded sky. | |
| 12. Do. | 70 | | do. | 12th, Weather exceedingly pleasant and agreeable, obscure clouded sky. | |
| 13. Do. | 70 | | do. | 13th, Weather exceedingly pleasant and agreeable, sky more serene and clear. | |
| 14. Do. | 70 | | do. | 14th, Weather still very pleasant, sky serene, air dry. | |
| 15. At Sea | 70 | | do. | 15th, Cool breezes, weather very pleasant, sky serene, air dry. | |
| 16. Do. | 70 | | do. | 16th, Weather most pleasant, dews at night. | |
| 17. Do. | 66 | | do. | 17th, Atmosphere thick and hazy, heavy dews at night. | |
| 18. Do. | 66 | | do. | 18th, Air chill and a little damp, but more clear, dews at night. | |
| 19. Do. | 60 | | do. | 19th, Fresh breezes, weather exceedingly agreeable. | |
| 20. Off Hydra | 58 | | do. | 20th, Cool pleasant weather, with heavy dews at night. | |
| 21. Off Spezia | 60 | rain | | 21st, Fine moderate weather, with showers towards the evening. | |
| 22. Do. | 60 | rain | | 22d, Dull hazy atmosphere with rain, temperature agreeable. | |
| 23. Do. | 62 | much r. | | 23d, Much thunder and lightning, with heavy rains. | |
| 24. Do. | 60 | | fair | 24th, Beautiful serene weather, cool, and exceedingly agreeable. | |
| 25. Do. | 62 | | do. | 25th, Weather exceedingly fine, sky clear, serene, heavy dews at night. | |
| 26. Do. | 62 | rain | | 26th, Day rather agreeable, much thunder, lightning and rain at night. | |
| 27. Do. | 58 | rain | | 27th, Damp hazy weather, with occasional showers. | |
| 28. Do. | 60 | | fair | 28th, Fine clear cloudless sky, with pleasant dews at night. | |
| 29. Do. | 60 | | do. | 29th, Fine clear cloudless sky, heavy dews at night. | |
| 30. Do. | 60 | | do. | 30th, Weather remarkably fine, sky serene, night dews heavy. | |

| 1825. | | | | | |
|---------|----------------|----|------|--|-------|
| Dec. 1. | Off Hydra | 63 | | 1st, Weather very fine. | |
| 2. | Do. | 64 | fair | 2d, Vcry fine weather. | |
| 3. | Do. | 68 | do. | 3d, Weather exceedingly pleasant, sky clear, air dry. | |
| 4. | Do. | 63 | do. | 4th, Weather rather warm, otherwise most pleasant. | |
| 5. | Do. | 66 | do. | 5th, Weather very fine, with heavy dews at night. | |
| 6. | At Sea | 62 | do. | 6th, Atmosphere hazy, otherwise very fine. | |
| 7. | Off Spezzia | 60 | do. | 7th, Weather cloudy, air damp and chill. | |
| 8. | Napoli Romania | 58 | do. | 8th, Cool cloudy weather, otherwise agreeable. | |
| 9. | Do. | 62 | do. | 9th, Agreeable fine weather, sky cloudy, atmosphere rather close. | |
| 10. | At Sea | 63 | do. | 10th, Cloudy, atmosphere close and oppressive. | |
| 11. | Off Spezzia | 60 | do. | 11th, Fine agreeable weather. | |
| 12. | Do. | 62 | rain | 12th, Heavy clouds, with thunder and much rain. | N. E. |
| 13. | Do. | 56 | fair | 13th, Cold cloudy weather, otherwise agreeable. | |
| 14. | At Sea | 55 | do. | 14th, Weather cold, cloudy, stormy, N. E. breezes, damp air. | N. E. |
| 15. | Do. | 60 | do. | 15th, Weather fine and agreeable, sky cloudy. | N. E. |
| 16. | Do. | 62 | rain | 16th, Dark cloudy weather, with much rain. | |
| 17. | Do. | 60 | fair | 17th, Weather fine, strong N. E. winds, air dry. | |
| 18. | Do. | 57 | do. | 18th, Cloudy weather, strong winds, air dry. | |
| 19. | Do. | 62 | do. | 19th, Weather exceedingly fine, atmosphere serene, dry. | |
| 20. | Samos | 62 | do. | 20th, Exceeding fine calm weather, air dry, rather cloudy. | |
| 21. | Do. | 63 | do. | 21st, Weather agreeable, calm, dry, serene atmosphere. | |
| 22. | Do. | 58 | do. | 22d, Weather exceedingly fine, sky clear, air dry. | |
| 23. | Do. | 63 | do. | 23d, Warm agreeable weather, air clear and dry. | |
| 24. | At Sea | 58 | do. | 24th, Atmosphere hazy, otherwise beautiful. | |
| 25. | Do. | 58 | do. | 25th, Rather cloudy, strong breezes, but beautiful weather. | N. E. |
| 26. | Smyrna | 55 | do. | 26th, Cold, hazy, sky clouded, air damp. | |
| 27. | Do. | 60 | rain | 27th, Much thunder and rain during the night, dry, sky clear and fair. | |
| 28. | Do. | 55 | do. | 28th, Weather cold and disagreeable, dark clouds, with frequent showers. | |
| 29. | Do. | 58 | fair | 29th, Weather more agreeable, cloudy damp air. | |
| 30. | Do. | 54 | do. | 30th, Weather cold, but exceedingly fine, air clear and dry. | |
| 31. | Do. | 54 | do. | 31st, Weather exceedingly beautiful, clear dry air. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|---------|------|--|--------|
| 1826. | | | | | |
| Jan. 1. At Smyrna | 54 | | fair | 1st, Beautiful serene weather, but heavy dews at night. | N. E. |
| 2. Do. | 54 | | do. | 2d, Beautiful serene weather, heavy dews at night. | N. E. |
| 3. Do. | 52 | | do. | 3d, Very cold, with N. E. winds, air, however, clear, and comparatively dry. | N. E. |
| 4. Do. | 42 | | do. | 4th, Cold tempestuous N. E. winds, sky clear, snow on surrounding hills. | N. E. |
| 5. Do. | 42 | | do. | 5th, Weather still cold and tempestuous, but dry, clear, and serene. | N. |
| 6. Do. | 43 | | do. | 6th, More moderate, but still very cold, air dry, sky clear. | N. |
| 7. Do. | 37 | | do. | 7th, Weather moderate, but very cold, much snow on high lands. | S. |
| 8. Do. | 44 | rain | | 8th, Sky dull, elouded, and overcast, with considerable rain. | S. |
| 9. Do. | 56 | do. | | 9th, Weather more mild, but tempestuous southerly winds, occasional rain. | S. |
| 10. Do. | 54 | do. | | 10th, Weather much more mild and moderate, southerly winds, with much rain. | S. |
| 11. Do. | 56 | | fair | 11th, Fine moderate agreeable weather. | |
| 12. Do. | 58 | some r. | | 12th, Weather more mild and agreeable, with occasional rains. | |
| 13. Do. | 50 | much r. | | 13th, Continued rains, with occasional strong squalls. | |
| 14. Do. | 52 | | fair | 14th, Weather comparatively mild and moderate. | |
| 15. At Sea | 52 | rain | | 15th, Tempestuous weather, with heavy rains. | |
| 16. Do. | 52 | | fair | 16th, Weather more uniform, agreeable and dry, cold wintry chiliness in the air. | |
| 17. Off Hydra | 48 | rain | | 17th, Cold, wet, stormy weather, hazy moist atmosphere. | |
| 18. Do. | 44 | do. | | 18th, Cold, stormy, and tempestuous weather, squally, occasional showers. | |
| 19. Do. | 44 | do. | | 19th, Cold, stormy, and tempestuous weather, with much rain, sleet and snow. | |
| 20. Off Spezzia | 46 | | fair | 20th, Cold dry air, serene sky, weather moderate, snow on surrounding hills. | |
| 21. Napoli Romania | 46 | rain | | 21st, Cold damp air, inclining to rain. | |
| 22. Do. | 48 | do. | | 22d, Dull hazy damp atmosphere, with much rain. | |
| 23. Off Spezzia | 48 | | fair | 23d, Dry chill air, weather much more moderate. | N. W. |
| 24. Off Hydra | 48 | | do. | 24th, Squally tempestuous weather, air dry, sky somewhat serene. | N. |
| 25. At Sea | 48 | | do. | 25th, Weather rather agreeable, dry clear air, strong N. W. breezes. | N. |
| 26. Do. | 46 | rain | | 26th, Strong tempestuous northerly winds, with much rain at night. | N. |
| 27. Cape Colonna | 46 | do. | | 27th, Cold stormy unsettled weather, heavy showers, northerly winds. | |
| 28. At Paros | 46 | | fair | 28th, Tempestuous northerly winds, damp cold atmosphere. | |
| 29. Do. | 49 | | do. | 29th, Moderate and agreeable, sky clear, air comparatively dry. | |
| 30. At Sea | 50 | | do. | 30th, Northerly winds, weather agreeable, and more moderate. | |
| 31. Do. | 52 | | do. | 31st, Weather moderate, air comparatively dry. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|-------------|------|--|--------|
| 1826. | | | | | |
| March 1. At Miconi | 48 | rain | | 1st, Cold chill tempestuous weather, winds N. E., occasional showers of rain. | N. E. |
| 2. Do. | 48 | do. | | 2d, Cold chill weather, tempestuous, with showers of rain. | N. E. |
| 3. Do. | 48 | do. | | 3d, Cold stormy N. E. winds, with occasional showers. | N. E. |
| 4. At Tino | 48 | | fair | 4th, Cold N. E. winds, air more dry, weather rather agreeable. | N. E. |
| 5. Do. | 44 | ra. ha. sn. | | 5th, Chill tempestuous weather, with hail. | N. E. |
| 6. Do. | 48 | | fair | 6th, Weather much more settled, day fine, air chill, but dry. | N. E. |
| 7. At Sira | 48 | r. & hail | | 7th, Cold and rather tempestuous weather, with rain, hail, and snow. | N. E. |
| 8. At Tino | 44 | do. | | 8th, Weather more moderate, sky dull and clouded, hail and rain. | N. E. |
| 9. Do. | 44 | do. | | 9th, Strong tempestuous N. E. winds, much rain, hail, and snow. | N. E. |
| 10. Do. | 50 | do. | | 10th, Much rain and snow, strong tempestuous winds. | N. E. |
| 11. Do. | 44 | do. | | 11th, Stormy and tempestuous weather, much rain, snow, and hail. | N. E. |
| 12. Do. | 44 | do. | | 12th, Stormy tempestuous weather, much hail, snow, rain. | N. E. |
| 13. Do. | 44 | do. | | 13th, Weather still tempestuous, with occasional showers of hail and rain. | N. E. |
| 14. Do. | 45 | do. | fair | 14th, Weather still stormy, much snow last night, day more clear and favourable. | N. E. |
| 15. At Sea | 50 | | do. | 15th, Squally and tempestuous, air dry. | N. E. |
| 16. Do. | 58 | | do. | 16th, Clear serene fine weather, air dry. | N. E. |
| 17. At Smyrna | 60 | | do. | 17th, Clear serene beautiful weather, air dry. | N. E. |
| 18. Do. | 48 | | do. | 18th, Cool breezes, clear serene cloudless sky, air dry. | N. E. |
| 19. Do. | 40 | | do. | 19th, Much snow in the night, cool chill air, sky clear, fresh breezes. | N. E. |
| 20. Do. | 44 | | do. | 20th, Cold dry air, with variable westerly winds. | N. E. |
| 21. Do. | 48 | | do. | 21st, Agreeable weather, sky serene, air dry. | N. E. |
| 22. Do. | 55 | | do. | 22d, Variable southerly winds, sky serene, clear, air dry. | N. E. |
| 23. Do. | 56 | | do. | 23d, Dull thick atmosphere, with showers of rain. | N. E. |
| 24. Do. | 60 | | do. | 24th, Fine agreeable weather, serene sky, air dry. | N. E. |
| 25. Do. | 60 | | do. | 25th, Soft mild southerly winds. | W. |
| 26. Do. | 60 | | do. | 26th, Very fine weather, clear serene sky, air dry. | S. |
| 27. Do. | 60 | | do. | 27th, Beautiful weather, sky clear, serene, air dry. | S. |
| 28. Do. | 68 | | do. | 28th, Warm sultry weather, with much lightning and disposition to rain. | S. W. |
| 29. At Sea | 60 | | do. | 29th, Rain, thunder and lightning last night, day agreeable. | S. W. |
| 30. Do. | 56 | | do. | 30th, Strong south-west breezes, otherwise agreeable. | S. W. |
| 31. Do. | 56 | | do. | 31st, Clear serene beautiful weather, air dry, no dews. | S. W. |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|------|------|---|----------|
| 1826. | | | | | |
| May 1. At Smyrna | 64 | | fair | 1st, Beautiful serene weather, land and sea breezes. | |
| 2. At Sea | 62 | | do. | 2d, Weather exceedingly fine, agreeable breezes. | W. |
| 3. Vourla | 62 | | do. | 3d, Beautiful serene weather, air dry. | S. |
| 4. Do. | 64 | | do. | 4th, Serene weather, with refreshing land and sea breezes. | |
| 5. At Sea | 66 | | do. | 5th, Beautiful serene weather. | S. W. |
| 6. Do. | 66 | | do. | 6th, Very fine weather, strong breezes from the south-west. | |
| 7. At Seio | 66 | | do. | 7th, Beautiful serene weather. | W. |
| 8. At Sea | 62 | | do. | 8th, Beautiful weather, refreshing winds from the west. | |
| 9. Do. | 64 | | do. | 9th, Very agreeable weather, air dry. | W. W. |
| 10. Do. | 64 | | do. | 10th, Beautiful serene weather, cooling breezes, air dry. | |
| 11. Do. | 64 | | do. | 11th, Serene weather, air dry. | |
| 12. Do. | 66 | | do. | 12th, Uncommon fine weather, air dry, no dews. | S. W. |
| 13. Do. | 66 | | do. | 13th, Day fine, a little hazy, and inclined to rain. | |
| 14. Do. | 66 | | do. | 14th, Very agreeable weather, with variable breezes, air dry. | |
| 15. At Alexandria | 68 | | do. | 15th, Exceeding fine weather, land and sea breezes. | |
| 16. Do. | 69 | | do. | 16th, Serene but oppressive weather, Sirocco. | |
| 17. Do. | 70 | | do. | 17th, Sirocco, tempestuous in the evening. | S. |
| 18. Do. | 70 | | do. | 18th, Very fine weather, land and sea breezes. | S. |
| 19. Do. | 70 | | do. | 19th, Very fine weather. | |
| 20. Do. | 69 | | do. | 20th, Very agreeable weather. | |
| 21. Do. | 69 | | do. | 21st, Very fine weather, with land and sea breezes, air dry. | N. E. |
| 22. Do. | 69 | | do. | 22d, Very fine weather, air dry. | |
| 23. Do. | 70 | | do. | 23d, Fine weather, air dry, sky serene. | |
| 24. Do. | 70 | | do. | 24th, Beautiful serene weather. | |
| 25. Do. | 74 | | do. | 25th, Very fine weather. | |
| 26. Do. | 70 | | do. | 26th, Fine weather, serene sky, dry air. | |
| 27. At Sea | 70 | | do. | 27th, Very fine weather. | |
| 28. Do. | 68 | | do. | 28th, Fine weather, air dry. | N. |
| 29. Do. | 70 | | do. | 29th, Very fine weather, considerable dews at night. | |
| 30. Do. | 72 | | do. | 30th, Fine weather, serene sky, refreshing breezes. | N. E. |
| 31. Do. | 70 | | do. | 31st, | |

| Time when, and place where. | Med. Tem. Fair. | Wet | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|-----|------|---|--------|
| 1826. | | | | | |
| July 1. At Smyrna | 72 | | fair | 1st, Very fine weather, agreeable cool sea breezes. | N. |
| 2. At Vourla | 76 | | do. | 2d, Very fine weather, air dry, sky serene. | N. |
| 3. At Sea | 76 | | do. | 3d, Agreeable weather, rather tempestuous winds. | N. |
| 4. Do. | 76 | | do. | 4th, Strong winds, clear dry air. | N. |
| 5. Do. | 70 | | do. | 5th, Fresh breezes, fine weather, sky clear and cloudless. | N. |
| 6. Do. | 70 | | do. | 6th, Fresh breezes, fine weather, serene sky. | N. |
| 7. Do. | 74 | | do. | 7th, Refreshing winds, with dews at night. | N. |
| 8. Do. | 75 | | do. | 8th, Clear beautiful serene weather, dews at night. | |
| 9. Do. | 76 | | do. | 9th, Beautiful, serene, calm weather, dews at night heavy. | |
| 10. Do. | 75 | | do. | 10th, Very fine weather, very heavy dews at night. | N. W. |
| 11. Do. | 75 | | do. | 11th, Calm oppressive weather, heavy dews at night. | N. W. |
| 12. Do. | 76 | | do. | 12th, Clear serene sky, heavy dews at night. | |
| 13. Do. | 76 | | do. | 13th, Agreeable breezes, serene sky, heavy dews. | N. |
| 14. Do. | 76 | | do. | 14th, Very agreeable weather, heavy dews at night. | N. W. |
| 15. Do. | 76 | | do. | 15th, Calm serene weather, heavy dews at night. | |
| 16. At Malta | 76 | | do. | 16th, Fresh breezes, but very agreeable weather, heavy dews. | |
| 17. Do. | 76 | | do. | 17th, Cool breezes, clear serene sky. | N. W. |
| 18. Do. | 76 | | do. | 18th, Warm oppressive weather, no dews. | |
| 19. Do. | 76 | | do. | 19th, Calm warm oppressive weather, no dews at night. | N. |
| 20. Do. | 78 | | do. | 20th, Weather tempered with cool breezes. | N. |
| 21. Do. | 81 | | do. | 21st, Oppressive at noon, otherwise fine weather, no dews. | |
| 22. Do. | 81 | | do. | 22d, Beautiful serene weather, cool breezes. | |
| 23. Do. | 79 | | do. | 23d, Calm serene and oppressive weather, no dews at night. | |
| 24. Do. | 80 | | do. | 24th, Beautiful serene weather, air dry. | |
| 25. Do. | 79 | | do. | 25th, Serene weather, with light refreshing winds, no dew. | N. |
| 26. Do. | 78 | | do. | 26th, Weather very warm, but not oppressive, agreeable winds. | N. |
| 27. Do. | 79 | | do. | 27th, Air dry, warmth tempered by cooling breezes. | N. |
| 28. Do. | 78 | | do. | 28th, Calm serene weather. | |
| 29. Do. | 78 | | do. | 29th, Calm serene weather. | |
| 30. Do. | 78 | | do. | 30th, Beautiful serene weather, no dews at night. | |
| 31. Do. | 78 | | do. | 31st, Calm serene weather. | |

| 1826. Aug. | 1. At Malta | 78 | | | | |
|---------------|----------------|----|------|---|-------|--|
| 2. | Do. | 80 | fair | 1st, Beautiful serene weather, no dews at night. | N. W. | |
| 3. | Do. | 80 | do. | 2d, Beautiful serene weather, refreshing airs, no dew. | S. E. | |
| 4. | Do. | 81 | do. | 3d, Serene calm weather, air dry. | N. E. | |
| 5. | Do. | 82 | do. | 4th, Calm serene weather, air dry, no dews. | | |
| 6. | Do. | 80 | do. | 5th, Serene, calm, oppressive weather, no dew. | | |
| 7. | Do. | 80 | do. | 6th, Serene fine settled weather. | | |
| 8. | Do. | 80 | do. | 7th, Fresh breezes, air dry. | | |
| 9. | Do. | 78 | do. | 8th, Sirocco, weather rather oppressive, but not disagreeable. | | |
| 10. | Do. | 80 | do. | 9th, Clear serene weather, cooling breezes, no dews. | | |
| 11. | Do. | 77 | do. | 10th, Warm serene weather, air dry, no dews. | | |
| 12. | Do. | 78 | do. | 11th, Sultry weather, sky not so serene, air dry. | | |
| 13. | Do. | 78 | do. | 12th, Calm serene weather, air dry. | | |
| 14. | Do. | 80 | do. | 13th, Fine serene weather, southerly airs, sirocco. | S. E. | |
| 15. | Do. | 82 | do. | 14th, Weather oppressive from sirocco. | S. E. | |
| 16. | Do. | 82 | do. | 15th, Serene weather, oppressively warm. | | |
| 17. | Do. | 76 | do. | 16th, Serene fine weather. | N. W. | |
| 18. | Do. | 76 | do. | 17th, Cool breezes, sky clear, serene. | | |
| 19. | Do. | 76 | do. | 18th, Warm oppressive weather, air dry, no dews. | | |
| 20. | Do. | 78 | do. | 19th, Warm oppressive weather. | | |
| 21. | Do. | 83 | do. | 20th, Weather tempered with cooling breezes, serene atmosphere. | N. E. | |
| 22. | Do. | 83 | do. | 21st, Oppressive at noon, otherwise agreeable. | | |
| 23. | Do. | 83 | do. | 22d, Beautiful serene weather, no dews. | N. | |
| 24. | Do. | 80 | do. | 23d, Calm, serene, oppressive weather. | | |
| 25. | Do. | 80 | do. | 24th, Dull, clouded, warm, oppressive weather. | | |
| 26. | Do. | 83 | do. | 25th, Sky still a little clouded, weather oppressive. | | |
| 27. | Do. | 81 | do. | 26th, Serene, warm, oppressive weather. | S. | |
| 28. | Do. | 82 | do. | 27th, Warm, serene, oppressive weather. | S. | |
| 29. | Do. | 84 | do. | 28th, Warm sultry atmosphere. | S. E. | |
| 30. | Do. | 84 | do. | 29th, Warm oppressive weather. | S. E. | |
| 31. | Do. | 82 | do. | 30th, Oppressive, warm, serene weather. | S. | |
| | | | | 31st, Sirocco, warm, oppressive. | S. E. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|------|------|--|--------|
| 1826. | | | | | |
| Sept. 1. At Malta | 82 | | fair | 1st, Serene, warm, oppressive weather, sirocco. | S. |
| 2. Do. | 83 | | do. | 2d, Sirocco. | S. E. |
| 3. Do. | 83 | | do. | 3d, Weather disagreeably oppressive, sirocco. | S. E. |
| 4. Do. | 82 | | do. | 4th, Disagreeable oppressive weather, sirocco. | S. E. |
| 5. Do. | 82 | | do. | 5th, Disagreeable oppressive weather, sirocco. | S. E. |
| 6. Do. | 82 | | do. | 6th, Disagreeable oppressive sirocco winds. | |
| 7. Do. | 80 | | do. | 7th, More agreeable to-day, showers at night. | |
| 8. Do. | 81 | | do. | 8th, Weather more agreeable, serene sky. | W. |
| 9. Do. | 82 | | do. | 9th, Weather rather oppressive at noon. | S. W. |
| 10. Do. | 83 | | do. | 10th, Cool breezes, serene sky, weather agreeable. | N. W. |
| 11. Do. | 81 | | do. | 11th, From the approaching rainy season at Malta, tunuli, dews at night. | N.S.W. |
| 12. Do. | 82 | | do. | 12th, Agreeable weather, occasional showers at night. | S. W. |
| 13. Do. | 82 | | do. | 13th, Sirocco, sky partially clouded, depositions at night general. | S. E. |
| 14. Do. | 86 | | do. | 14th, Sirocco, warm, oppressive, sky dull, clouded. | S. E. |
| 15. Do. | 80 | | do. | 15th, Sirocco, dull cloudy weather, obscure sky, dews at night heavy. | S. E. |
| 16. Do. | 80 | | do. | 16th, Sirocco, dull oppressive weather, dews at night. | |
| 17. Do. | 79 | | do. | 17th, Sirocco, air more cool and clear than at Malta. | S. E. |
| 18. Do. | 78 | | do. | 18th, Cool refreshing breezes, sky clear. | S. |
| 19. Do. | 78 | | do. | 19th, Cool agreeable weather, dews at night. | S. E. |
| 20. Do. | 78 | | do. | 20th, Cool agreeable weather, dews at night. | S. W. |
| 21. Do. | 78 | | do. | 21st, Fine agreeable weather. | W. |
| 22. Do. | 80 | | do. | 22d, Westerly winds. | W. |
| 23. Do. | 78 | | do. | 23d, Pleasant weather, air comparatively dry. | W. |
| 24. Do. | 77 | | do. | 24th, Heavy rain in the night, atmosphere dull, heavy. | |
| 25. Do. | 76 | | do. | 25th, Cool and agreeable. | |
| 26. Do. | 74 | | do. | 26th, Weather very agreeable. | |
| 27. Do. | 74 | | do. | 27th, Weather very agreeable, no dews at night. | |
| 28. At Alexandria | 76 | | do. | 28th, Very fine weather, no dews at night. | |
| 29. Do. | 76 | | do. | 29th, Very fine weather, no dews at night. | |
| 30. Do. | 73 | | do. | 30th, Fine weather, air dry, no dews at night. | |

| 1826. Oct. 1. | At Alexandria Do. | 75 | fair | Very fine weather, no dews at night. | W. S. W. S. W. |
|------------------|----------------------|----|---------|---|----------------------|
| | | | | | |
| 2. | At Sea | 80 | do. | Fine pleasant weather, cooling breezes. | S. W. |
| 3. | Do. | 75 | do. | Very agreeable, clear serene sky, refreshing breezes. | S. W. |
| 4. | Do. | 76 | do. | Strong breezes, sky serene, air dry, slight dews. | S. W. |
| 5. | Do. | 75 | do. | Fine moderate weather. | S. W. |
| 6. | Do. | 76 | do. | Strong winds, dull obscure sky. | S. E. |
| 7. | Do. | 75 | do. | Heavy rain this morning, strong breezes. | S. E. |
| 8. | Do. | 76 | fair | Strong squalls with much lightning last night, sky obscure. | S. E. |
| 9. | Do. | 74 | do. | Rain and lightning last night, more settled to-day. | N. W. |
| 10. | Do. | 71 | do. | Strong winds, weather rather agreeable, dews at night. | S. W. |
| 11. | Do. | 72 | do. | Pleasant weather, dews at night. | S. W. |
| 12. | Do. | 70 | much r. | Dark obscure sky, thunder and lightning, torrents of rain. | S. W. |
| 13. | At Malta | 72 | do. | Thunder and lightning. | S. W. |
| 14. | Do. | 72 | do. | Heavy and continued rain. | S. W. |
| 15. | Do. | 78 | do. | Thunder and lightning, with continued rain. | S. W. |
| 16. | Do. | 70 | do. | Weather rather more clear and settled. | S. W. |
| 17. | Do. | 78 | fair | Weather more settled. | S. W. |
| 18. | At Sea | 70 | do. | Strong breezes, dull atmosphere, dews at night. | S. W. |
| 19. | Do. | 70 | do. | Weather more settled and agreeable. | S. W. |
| 20. | Do. | 70 | do. | Agreeable weather, dews general at sea. | S. W. |
| 21. | Do. | 70 | do. | Moderate agreeable weather, dews heavy at night. | S. W. |
| 22. | Do. | 70 | do. | Moderate agreeable weather, heavy dews at night. | S. W. |
| 23. | Do. | 72 | do. | Calm, serene, agreeable weather, dews at night. | S. W. |
| 24. | Do. | 72 | do. | Rain in the night, cool breezes. | S. W. |
| 25. | Do. | 67 | rain | Dull obscure sky, occasional rain, dews at night. | S. W. |
| 26. | Do. | 65 | fair | Dull obscure stormy sky, strong winds, some rain. | S. W. |
| 27. | Do. | 70 | rain | Rain, thunder and lightning, obscure sky. | S. W. |
| 28. | Do. | 72 | do. | Stormy tempestuous weather, strong winds, occasional rain. | S. W. |
| 29. | Do. | 72 | fair | Stormy tempestuous weather. | S. W. |
| 30. | Do. | 72 | do. | Weather more moderate, sky clearer, slight dews. | S. W. |
| 31. | Do. | 72 | rain | Fresh breezes, some rain. | S. W. |

| Time when, and place where. | Med. Tem. Fahr. | Wet | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------|------|------|--|--------|
| 1826. | | | | | |
| Nov. 1. At Sea | 73 | | fair | 1st, Fine moderate agreeable weather, dews at night. | S. W. |
| 2. Do. | 73 | | do. | 2d, Fine dry weather, dews at night. | N. |
| 3. At Alexandria | 73 | | do. | 3d, Fine clear serene weather, no dew. | S. W. |
| 4. Do. | 73 | | do. | 4th, Very agreeable weather, no dew. | N. |
| 5. Do. | 73 | | do. | 5th, Fine serene weather, little or no dew. | N. |
| 6. Do. | 72 | | do. | 6th, Beautiful weather, refreshing breezes. | N. E. |
| 7. Do. | 73 | | do. | 7th, Fine serene weather, no dews. | N. W. |
| 8. Do. | 73 | | do. | 8th, Fine serene weather, cool breezes. | W. |
| 9. Do. | 75 | | do. | 9th, Calm serene weather. | N. |
| 10. Do. | 73 | | do. | 10th, Calm serene weather. | N. E. |
| 11. Do. | 76 | | do. | 11th, Serene weather, refreshing winds. | N. W. |
| 12. Do. | 73 | rain | | 12th, Heavy rain, with thunder and lightning. | N. W. |
| 13. Do. | 64 | do. | | 13th, Stormy winds, much rain. | W. |
| 14. Do. | 64 | do. | fair | 14th, Still tempestuous, with occasional rain. | N. |
| 15. Do. | 66 | | do. | 15th, Moderate fine weather, light breezes. | W. |
| 16. Do. | 66 | | do. | 16th, Moderate agreeable weather, air dry. | N. |
| 17. Do. | 66 | | do. | 17th, Fine pleasant weather, air comparatively dry. | W. |
| 18. Do. | 66 | | do. | 18th, Fresh breezes, dry air. | W. |
| 19. Do. | 65 | | do. | 19th, Strong winds, rain at night. | W. |
| 20. Do. | 67 | | do. | 20th, Weather rather tempestuous, with occasional rain at night. | W. |
| 21. Do. | 68 | | do. | 21st, Fine clear agreeable weather, air clear, dry. | N. |
| 22. Do. | 68 | | do. | 22d, Fine serene weather, refreshing breezes. | N. |
| 23. Do. | 68 | | do. | 23d, Settled agreeable weather, air clear, dry. | N. |
| 24. Do. | 78 | | do. | 24th, Clear serene agreeable weather. | W. |
| 25. Do. | 80 | | do. | 25th, Warm serene weather. | S. W. |
| 26. Do. | 68 | | do. | 26th, Very fine serene weather. | S. E. |
| 27. Do. | 69 | | do. | 27th, Weather hot at noon, still agreeable. | S. E. |
| 28. Do. | 70 | | do. | 28th, Remarkably pleasant, but oppressive at noon. | |
| 29. Do. | 70 | | do. | 29th, Serene fine weather. | |
| 30. Do. | 70 | | do. | 30th, Very fine clear serene weather, with easterly winds. | |

| 1826. | | | | | | |
|---------|---------------|----|---------|------|-------|--|
| Dec. 1. | At Alexandria | 70 | | fair | 1st, | Fine serene weather, heavy dews on shore, none in harbour. |
| 2. | Do. | 71 | | do. | 2d, | Weather very agreeable, clear serene sky. |
| 3. | Do. | 65 | | do. | 3d, | Sky somewhat obscure, with occasional rain at night. |
| 4. | Do. | 70 | | do. | 4th, | Fine moderate weather, heavy dews on shore. |
| 5. | Do. | 68 | | do. | 5th, | Serene sky, weather very pleasant. |
| 6. | Do. | 65 | | do. | 6th, | Cold winds, air comparatively dry. |
| 7. | Do. | 64 | | do. | 7th, | Chill wintry appearance of sky. |
| 8. | Do. | 62 | | | 8th, | Cold tempestuous winds, occasional rain. |
| 9. | Do. | 62 | rain | do. | 9th, | Cold tempestuous winds, occasional rain. |
| 10. | Do. | 63 | | | 10th, | Cold northerly winds, air dry. |
| 11. | Do. | 64 | | | 11th, | Tempestuous winds, weather cold, chill. |
| 12. | Do. | 62 | | | 12th, | Morc moderate weather, air cold, sky obscure. |
| 13. | At Sea | 62 | much r. | | 13th, | Cold windy weather, much rain. |
| 14. | Do. | 63 | | fair | 14th, | Serene weather, air dry, no dews. |
| 15. | Do. | 63 | | do. | 15th, | Fine moderate weather, cool breezes, air dry. |
| 16. | Do. | 64 | | do. | 16th, | Weather exceedingly agreeable. |
| 17. | Do. | 65 | | do. | 17th, | Very fine weather, air dry, sky serene. |
| 18. | Do. | 64 | | do. | 18th, | Very fine agreeable weather. |
| 19. | Off Cyprus | 63 | | do. | 19th, | Fine dry agreeable weather. |
| 20. | Do. | 62 | | do. | 20th, | Fine calm serene weather. |
| 21. | Do. | 62 | | do. | 21st, | Hazy obscure sky. |
| 22. | At Sea | 67 | | do. | 22d, | Fresh breezes, obscure sky, weather good. |
| 23. | Do. | 67 | | do. | 23d, | Calm weather, air chill. |
| 24. | Do. | 67 | | do. | 24th, | Unsettled weather, sky dull, rain at night. |
| 25. | Do. | 63 | | do. | 25th, | Cold variable winds, much rain at night, squalls. |
| 26. | Do. | 63 | rain | | 26th, | Hazy weather, rain at night heavy. |
| 27. | Do. | 58 | much r. | | 27th, | Strong and squally winds, much rain at night. |
| 28. | Do. | 60 | do. | | 28th, | Cold tempestuous weather. |
| 29. | Do. | 57 | | fair | 29th, | Fine moderate cool weather, air comparatively dry. |
| 30. | Do. | 55 | | do. | 30th, | Moderate weather, occasional squalls. |
| 31. | Off Rhodes | 57 | much r. | | 31st, | Occasional squalls, with much rain. |

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S. W.

S. W.

N. E.

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S. E.

N. E.

N. W.

N. W.

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|---------|------|--|--------|
| 1827. | | | | | |
| Jan. 1. At Rhodes | 55 | | fair | 1st, Cold chill unsettled weather. | N. |
| 2. At Semi | 50 | | do. | 2d, Cold chill weather, air dry. | N. W. |
| 3. Do. | 54 | | do. | 3d, Dry agreeable weather. | N. |
| 4. Do. | 54 | | do. | 4th, Moderate agreeable weather, rain at night. | |
| 5. Do. | 59 | rain | | 5th, Some rain, weather, however, agreeable. | |
| 6. At Sea | 62 | | fair | 6th, Fresh breezes, weather agreeable. | S. W. |
| 7. Do. | 62 | | do. | 7th, Strong tempestuous winds. | S. W. |
| 8. Do. | 60 | | do. | 8th, Strong winds, weather otherwise good. | S. W. |
| 9. At Smyrna | 54 | | do. | 9th, Moderate agreeable weather. | |
| 10. Do. | 54 | | do. | 10th, Fine agreeable weather. | |
| 11. Do. | 56 | | do. | 11th, Calm weather, with heavy rain. | N. |
| 12. Do. | 58 | rain | fair | 12th, Cold chill variable winds, damp air. | S. W. |
| 13. Do. | 59 | rain | | 13th, Occasional rain. | S. E. |
| 14. At Vourla | 48 | do. | | 14th, Weather tempestuous, with rain. | S. |
| 15. Do. | 50 | do. | | 15th, Chill, with rain. | S. W. |
| 16. Do. | 44 | do. | | 16th, Tempestuous, with rain. | S. W. |
| 17. Do. | 50 | do. | | 17th, Strong tempestuous gales, with much rain. | S. W. |
| 18. At Sea | 47 | much r. | | 18th, Strong tempestuous gales, with rain. | N. |
| 19. At Mixylene | 47 | do. | | 19th, Much rain at night, more settled to-day, cold and chill. | S. W. |
| 20. Do. | 58 | rain | | 20th, Strong tempestuous gales, much rain. | S. W. |
| 21. Do. | 47 | do. | fair | 21st, Cold rainy weather. | S. |
| 22. Do. | 47 | | do. | 22d, Weather much more settled. | |
| 23. Do. | 57 | | do. | 23d, Moderate settled weather. | S. |
| 24. Do. | 53 | | do. | 24th, Agreeable weather. | S. |
| 25. Do. | 50 | much r. | | 25th, Variable, with much rain. | |
| 26. Do. | 52 | | fair | 26th, Agreeable weather, with chill winds. | N. |
| 27. Do. | 55 | | do. | 27th, Fine agreeable weather. | S. |
| 28. At Sea | 63 | | do. | 28th, Dry agreeable weather. | |
| 29. Do. | 63 | | do. | 29th, Fine agreeable weather. | W. |
| 30. Do. | 63 | | do. | 30th, Moderate agreeable weather. | S. W. |
| 31. Do. | 63 | | do. | 31st, Moderate agreeable weather. | S. W. |

| 1827. | | | | | | |
|---------|---------------|----|------|--|----------|--|
| Feb. 1. | At Sea | 62 | fair | 1st, Fine dry serene weather. | S. S. | |
| 2. | At Samos | 62 | do. | 2d, Fine serene weather. | | |
| 3. | Do. | 62 | do. | 3d, Air a little raw and damp, some rain in the night. | N. | |
| 4. | Do. | 62 | | 4th, Last night stormy, with hail and rain, hail nearly one inch in circumference. | N. | |
| 5. | Do. | 58 | fair | 5th, Fine weather. | S. | |
| 6. | At Sea | 58 | do. | 6th, Fine weather, air dry. | N. | |
| 7. | Do. | 62 | | 7th, Strong winds, much rain, thunder and lightning. | N. | |
| 8. | At Cos | 61 | fair | 8th, Settled weather, air dry. | N. | |
| 9. | Do. | 58 | rain | 9th, Heavy showers of rain, chill winds. | N. | |
| 10. | Do. | 53 | fair | 10th, Chill but dry northerly winds. | N. | |
| 11. | At Sea | 60 | do. | 11th, Weather very agreeable, air dry. | N. | |
| 12. | Do. | 62 | do. | 12th, Agreeable dry weather. | S. S. W. | |
| 13. | Do. | 62 | do. | 13th, Very fine moderate weather, air dry. | S. | |
| 14. | Do. | 62 | do. | 14th, Fine agreeable weather. | S. W. | |
| 15. | Do. | 64 | do. | 15th, Fine agreeable weather. | N. | |
| 16. | Do. | 68 | do. | 16th, Dry agreeable weather. | N. W. | |
| 17. | Do. | 66 | do. | 17th, Weather very agreeable, air dry. | N. | |
| 18. | At Alexandria | 62 | do. | 18th, Fine dry weather, fresh breezes. | S. E. | |
| 19. | Do. | 62 | do. | 19th, Moderate agreeable weather, air dry, no dews. | N. | |
| 20. | Do. | 62 | do. | 20th, Serene weather, air dry. | S. E. | |
| 21. | Do. | 62 | do. | 21st, Fine serene weather, a few drops of rain. | N. | |
| 22. | Do. | 63 | do. | 22d, Fine weather, heavy rain in the night. | N. E. | |
| 23. | Do. | 64 | do. | 23d, Fine serene weather. | W. | |
| 24. | Do. | 67 | do. | 24th, Fresh breezes, very fine weather. | W. | |
| 25. | Do. | 62 | rain | 25th, Strong winds, with occasional rain. | N. E. | |
| 26. | Do. | 63 | fair | 26th, Very fine weather. | N. E. | |
| 27. | Do. | 63 | do. | 27th, Fine weather, atmosphere comparatively dry. | N. E. | |
| 28. | Do. | 65 | do. | 28th, Fresh breezes, weather uncommonly fine. | N. E. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|------|------|--|--------|
| 1827. | | | | | |
| March 1. At Alexandria | 61 | | fair | 1st, Fine serene weather. | W. |
| 2. At Sea | 62 | rain | | 2d, Variable winds, occasional rain. | N. W. |
| 3. Do. | 62 | | fair | 3d, Very fine agreeable weather. | W. |
| 4. Do. | 62 | | do. | 4th, Weather exceedingly fine, heavy dews at night. | S. |
| 5. Do. | 63 | | do. | 5th, Fine agreeable weather. | |
| 6. At Makry | 66 | | do. | 6th, Beautiful serene weather, very heavy dews at night. | |
| 7. Do. | 63 | | do. | 7th, Serene weather, heavy dews at night. | |
| 8. Do. | 68 | | do. | 8th, Fine agreeable weather, heavy dews. | |
| 9. Do. | 69 | | do. | 9th, Very fine weather, heavy dews. | |
| 10. Do. | 64 | | do. | 10th, Weather very fine. | |
| 11. Off Rhodes | 65 | | do. | 11th, Fine agreeable weather. | W. |
| 12. At Sea | 60 | | do. | 12th, Very fine weather. | S. E. |
| 13. Do. | 60 | rain | | 13th, Some rain, weather generally agreeable. | W. |
| 14. At Alexandria | 61 | | fair | 14th, Strong tempestuous winds, weather dry. | N. W. |
| 15. Do. | 64 | | do. | 15th, Strong winds, atmosphere hazy. | N. W. |
| 16. Do. | 64 | | do. | 16th, Fine dry agreeable weather, heavy dews at night. | N. W. |
| 17. Do. | 65 | | do. | 17th, Fine agreeable weather, fresh breezes, heavy dews. | W. |
| 18. Do. | 64 | | do. | 18th, Serene weather, dews at night heavy. | W. |
| 19. Do. | 65 | | do. | 19th, Warm oppressive weather. | S. E. |
| 20. Do. | 65 | | do. | 20th, Variable winds, very fine weather, but sultry. | W. |
| 21. Do. | 63 | | do. | 21st, Very fine weather, no dews at night. | N. W. |
| 22. Do. | 63 | | do. | 22d, Fresh breezes, weather very fine. | N. W. |
| 23. Do. | 64 | | do. | 23d, Fine weather, no dews at night. | N. |
| 24. Do. | 64 | | do. | 24th, Fresh breezes, weather uncommonly fine. | W. |
| 25. Do. | 65 | | do. | 25th, Fine serene weather. | |
| 26. Do. | 64 | | do. | 26th, Fine moderate weather. | |
| 27. Do. | 68 | | do. | 27th, Serene fine weather. | |
| 28. Do. | 60 | | do. | 28th, Strong winds, weather dry and agreeable. | N. |
| 29. Do. | 60 | | do. | 29th, Cold winds, but fine weather. | N. |
| 30. Do. | 60 | | do. | 30th, Variable winds, weather uncommonly fine. | E. |
| 31. Do. | 63 | | do. | 31st, Uncommon fine weather, dry air. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|------|------|--|--------|
| 1827. | | | | | |
| May 1. At Malta | 68 | | fair | 1st, Moderate agreeable weather, no dews. | E. |
| 2. Do. | 65 | | do. | 2d, Fine moderate weather. | |
| 3. Do. | 68 | | do. | 3d, Serene weather, dews at night not obvious. | |
| 4. Do. | 68 | | do. | 4th, Fine moderate weather. | |
| 5. Do. | 66 | | do. | 5th, Fresh breezes, weather agreeable. | S. E. |
| 6. Do. | 63 | rain | | 6th, Fresh breezes, with frequent showers. | N. E. |
| 7. Do. | 66 | | fair | 7th, Weather uncommonly fine, variable winds, slight dews. | N. E. |
| 8. Do. | 67 | | do. | 8th, Fine weather. | E. |
| 9. Do. | 67 | | do. | 9th, Weather very fine, slight dews at night. | |
| 10. Do. | 66 | | do. | 10th, Moderate settled weather, slight dews. | |
| 11. Do. | 67 | | do. | 11th, Fresh breezes, uncommon fine weather. | |
| 12. Do. | 76 | | do. | 12th, Fine serene weather. | |
| 13. Do. | 66 | | do. | 13th, Weather exceedingly fine. | |
| 14. Do. | 66 | | do. | 14th, Weather very fine. | |
| 15. Do. | 67 | | do. | 15th, Light variable winds, settled weather. | |
| 16. Do. | 64 | rain | | 16th, Considerable showers of rain. | NN.W. |
| 17. Do. | 67 | | fair | 17th, Weather very fine. | W. |
| 18. Do. | 67 | | do. | 18th, Calm serene weather. | |
| 19. Do. | 68 | | do. | 19th, Fine serene weather, dews at night heavy. | |
| 20. Do. | 68 | | do. | 20th, Calm moderate weather, heavy dews at night. | |
| 21. Do. | 63 | | do. | 21st, Calm moderate weather. | |
| 22. Do. | 67 | | do. | 22d, Fresh breezes, weather very fine. | W. |
| 23. Do. | 66 | | do. | 23d, Slight dews, fine weather. | W. |
| 24. Do. | 66 | rain | | 24th, Fresh breezes, weather very agreeable, slight dews. | N. W. |
| 25. Do. | 67 | | fair | 25th, Fine moderate serene weather. | |
| 26. Do. | 68 | | do. | 26th, Fine moderate weather, variable winds. | E. |
| 27. Do. | 66 | rain | | 27th, Some rain, but weather agreeable. | N. W. |
| 28. Do. | 68 | | fair | 28th, Fine moderate weather. | W. |
| 29. At Sea | 64 | | do. | 29th, Fine moderate weather. | W. |
| 30. Do. | 68 | | do. | 30th, Fine moderate weather, refreshing breezes. | |
| 31. Do. | 70 | | do. | 31st, Very fine weather, light breezes. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|-----|------|---|--------|
| 1827. | | | | | |
| July 1. At Alexandria | 77 | | fair | 1st, Good weather, dews at night. | W. |
| 2. Do. | 77 | | do. | 2d, Fresh breezes, weather very agreeable, dews at night. | W. |
| 3. Do. | 76 | | do. | 3d, Fresh breezes, weather very agreeable, dews. | W. |
| 4. Do. | 77 | | do. | 4th, Very agreeable weather, dews at night. | W. |
| 5. Do. | 72 | | do. | 5th, Weather very fine, moderate breezes. | W. |
| 6. Do. | 77 | | do. | 6th, Refreshing winds, weather very pleasant. | N. W. |
| 7. Do. | 78 | | do. | 7th, Refreshing breezes, night more serene, dry. | W. |
| 8. Do. | 78 | | do. | 8th, Refreshing breezes, very fine weather. | N. W. |
| 9. Do. | 78 | | do. | 9th, Weather exceedingly fine. | N. W. |
| 10. Do. | 78 | | do. | 10th, Fresh winds, very fine weather. | N. W. |
| 11. Do. | 78 | | do. | 11th, Agreeable refreshing breezes. | W. |
| 12. Do. | 78 | | do. | 12th, Very fine weather. | |
| 13. Do. | 78 | | do. | 13th, Air refreshed, and tempered with winds from the north-west. | N. W. |
| 14. Do. | 78 | | do. | 14th, Very fine weather. | N. W. |
| 15. Do. | 78 | | do. | 15th, Weather cool and agreeable. | W. |
| 16. Do. | 78 | | do. | 16th, Fresh breezes, weather agreeable. | N. W. |
| 17. Do. | 78 | | do. | 17th, Prevalent north-west breezes, weather very agreeable. | N. W. |
| 18. Do. | 78 | | do. | 18th, Light airs. | N. W. |
| 19. Do. | 78 | | do. | 19th, Fresh breezes, weather temperate for the climate. | N. W. |
| 20. Do. | 78 | | do. | 20th, Fresh breezes, weather agreeable. | N. W. |
| 21. At Sea | 77 | | do. | 21st, Fine pleasant weather, refreshing breezes, slight dews. | N. W. |
| 22. Do. | 77 | | do. | 22d, Variable winds, weather temperate and agreeable. | S. W. |
| 23. Do. | 77 | | do. | 23d, Fresh breezes, fine weather. | N. W. |
| 24. Do. | 82 | | do. | 24th, Fine pleasant weather, slight dews. | N. W. |
| 25. Off Rhodes | 85 | | do. | 25th, Light agreeable winds, very fine weather. | S. W. |
| 26. Do. | 77 | | do. | 26th, Weather rather tempestuous, strong winds. | N. W. |
| 27. Off Candia | 83 | | do. | 27th, Slight breezes, air serene and dry. | S. W. |
| 28. Do. | 82 | | do. | 28th, Light winds, sky serene, no obvious dews at night. | N. W. |
| 29. Do. | 82 | | do. | 29th, Light variable winds, air dry, sky serene. | N. W. |
| 30. Do. | 81 | | do. | 30th, Light variable winds, serene sky. | N. W. |
| 31. Do. | 81 | | do. | 31st, Variable light winds, fine weather. | N. W. |

| 1827. | | | | | | |
|---------|---------------|----|------|-------|---|-------|
| Aug. 1. | Off Candia | 80 | fair | 1st, | Atmosphere damp, and oppressive heavy dews. | N. E. |
| 2. | At Sea | 80 | do. | 2d, | Fresh breezes, weather very pleasant. | W. |
| 3. | Do. | 79 | do. | 3d, | Weather very fine. | N. W. |
| 4. | Do. | 80 | do. | 4th, | Light winds, sky serene, air dry. | N. W. |
| 5. | Do. | 80 | do. | 5th, | Sky serene, air dry. | N. W. |
| 6. | Do. | 80 | do. | 6th, | Light airs, dry serene weather. | N. W. |
| 7. | Do. | 80 | do. | 7th, | Sky serene, air dry. | N. |
| 8. | Do. | 80 | do. | 8th, | Damp atmosphere, heavy dews at night. | N. W. |
| 9. | Off Malta | 82 | do. | 9th, | Moderate breezes, dews at night. | N. |
| 10. | Do. | 84 | do. | 10th, | Refreshing breezes, dews at night heavy. | N. |
| 11. | Do. | 82 | do. | 11th, | Sky serene, refreshing breezes, dews. | |
| 12. | Do. | 86 | do. | 12th, | Serene but sultry weather, dews at night. | |
| 13. | Do. | 83 | do. | 13th, | Fine serene weather, dews at night. | |
| 14. | Do. | 79 | do. | 14th, | Light breezes, dews at night. | N. |
| 15. | At Sea | 80 | do. | 15th, | Serene weather, light breezes, dews at night. | S. E. |
| 16. | Do. | 79 | do. | 16th, | Fine serene weather. | S. E. |
| 17. | Do. | 83 | do. | 17th, | Calm serene sultry weather. | N. E. |
| 18. | Do. | 82 | do. | 18th, | Sky serene, refreshing breezes. | N. E. |
| 19. | Do. | 82 | do. | 19th, | Atmosphere loaded and moist, heavy dews at night. | N. E. |
| 20. | Do. | 82 | do. | 20th, | Air damp and oppressive, fresh breezes. | N. E. |
| 21. | Do. | 82 | do. | 21st, | Good weather, heavy dews at night. | N. W. |
| 22. | Do. | 82 | do. | 22d, | Light breezes, sky serene, heavy dews at night. | N. W. |
| 23. | Do. | 82 | do. | 23d, | Light airs, weather agreeable, heavy dews. | N. W. |
| 24. | Do. | 80 | do. | 24th, | Very fine weather, but heavy dews. | N. W. |
| 25. | Do. | 82 | do. | 25th, | Very fine weather, heavy dews at night. | N. W. |
| 26. | At Alexandria | 82 | do. | 26th, | Refreshing breezes, sky serene, dews at night. | N. |
| 27. | Do. | 80 | do. | 27th, | Refreshing winds, slight dews. | N. |
| 28. | At Sea | 80 | do. | 28th, | Sky serene, refreshing breezes, slight dews. | N. |
| 29. | Do. | 80 | do. | 29th, | Refreshing winds, sky serene, slight dews. | N. |
| 30. | Do. | 80 | do. | 30th, | Refreshing breezes, serene sky, slight dews. | N. |
| 31. | Do. | 80 | do. | 31st, | Fresh breezes, serene sky, slight dews. | N. |

| Time when, and place where. | Med. Tem. Fahr. | Wet | Dry | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|------|------|--|--------|
| 1827. | | | | | |
| Sept. 1. At Sea | 80 | | fair | 1st, Fine weather, serene sky. | N. |
| 2. Do. | 78 | | do. | 2d, Fresh breezes, serene sky. | N. W. |
| 3. Do. | 78 | | do. | 3d, Weather agreeable, fresh breezes. | N. W. |
| 4. Do. | 77 | | do. | 4th, Fresh breezes, weather agreeable. | N. W. |
| 5. Do. | 78 | | do. | 5th, Very fine weather, fresh breezes. | W. |
| 6. Off Candia | 80 | | do. | 6th, Weather uncommonly fine. | |
| 7. Do. | 79 | | do. | 7th, Very fine weather. | |
| 8. Do. | 78 | | do. | 8th, Serene weather. | |
| 9. Do. | 77 | | do. | 9th, Refreshing breezes, fine weather, little or no dews. | W. |
| 10. Do. | 74 | | do. | 10th, Very pleasant fresh breezes. | W. |
| 11. At Sea | 74 | | | 11th, Tempestuous winds, with rain. | W. |
| 12. Do. | 74 | | fair | 12th, Fresh breezes, tumuli, pleasant weather. | N. W. |
| 13. Do. | 75 | | do. | 13th, Weather pleasant and agreeable, tumuli. | |
| 14. Do. | 76 | | do. | 14th, Tumuli, pleasant weather. | N. |
| 15. Do. | 78 | | do. | 15th, Sky less clouded, no dews. | W. |
| 16. Do. | 77 | | do. | 16th, Light breezes, cloudy sky disappearing. | S. W. |
| 17. Do. | 78 | | do. | 17th, Light winds, weather uncommonly fine, no dews. | N. |
| 18. Do. | 76 | | do. | 18th, Light breezes, tumuli, pleasant weather. | N. E. |
| 19. Do. | 76 | | do. | 19th, Considerable rain last night, with lightning. | N. W. |
| 20. Do. | 72 | rain | | 20th, Light airs, some rain. | N. W. |
| 21. Do. | 70 | | | 21st, Fresh breezes, occasional rain, dark thunder clouds, tumuli. | W. |
| 22. Do. | 70 | do. | | 22d, Fresh winds, much lightning and rain. | W. |
| 23. Do. | 74 | | fair | 23d, Light airs, sky more serene, and free from tumuli. | W. |
| 24. Do. | 80 | | do. | 24th, Sky serene, air dry, no dews. | W. |
| 25. Off Sicily | 77 | | do. | 25th, Serene sky, dry air. | S. |
| 26. At Malta | 76 | | do. | 26th, Serene pleasant weather. | S. |
| 27. Do. | 74 | | do. | 27th, Serene clear sky. | N. W. |
| 28. Do. | 74 | | do. | 28th, Serene sky, sultry air but dry, winds variable. | |
| 29. Do. | 76 | | do. | 29th, Variable winds, serene sky, slight dews. | E. |
| 30. Do. | 78 | | do. | 30th, Sultry state of atmosphere, sky beset with dark tumuli. | |

| 1827. | | | | | | |
|---------|---------------|----|----------|------|---|-------|
| Oct. 1. | At Malta | 72 | heavy r. | fair | 1st, Much rain, thunder, and lightning last night, day more serene. | W. |
| 2. | Do. | 75 | | do. | 2d, Sultry weather, day more serene, light breezes. | W. |
| 3. | Do. | 75 | | | 3d, Variable breezes, sky obscured with dark thunder clouds. | W. |
| 4. | Do. | 76 | | | 4th, Heavy continued rain, thunder and lightning. | W. |
| 5. | Do. | 68 | | fair | 5th, Fresh breezes, sky clouded and stormy, no dews. | W. |
| 6. | Do. | 75 | | do. | 6th, Weather more settled, sky more serene. | W. |
| 7. | Do. | 74 | | do. | 7th, Variable winds, occasional rain. | W. |
| 8. | Do. | 72 | rain | | 8th, Slight breezes with occasional rains. | W. |
| 9. | Do. | 74 | | fair | 9th, Sky beset with tumuli, dews at night. | S. E. |
| 10. | Do. | 74 | | do. | 10th, Light winds, weather sultry, dews at night. | S. E. |
| 11. | Do. | 78 | | do. | 11th, Light winds, air very damp, heavy dews. | S. E. |
| 12. | Off Malta | 74 | | do. | 12th, Southerly breezes, air damp, heavy dews. | W. |
| 13. | At Sea | 75 | | do. | 13th, Sky somewhat serene, dews at night. | W. |
| 14. | Do. | 76 | | do. | 14th, Fine weather, air damp, dews at night. | S. E. |
| 15. | Do. | 76 | | do. | 15th, Light breezes, fine serene weather, dews at night. | S. E. |
| 16. | Do. | 76 | | do. | 16th, Considerable rain last night, with lightning, dews. | S. E. |
| 17. | Off Cerigo | 72 | | do. | 17th, Strong gales, weather tempestuous, air damp. | S. E. |
| 18. | Do. | 68 | | do. | 18th, Stormy tempestuous weather, air damp. | S. |
| 19. | Do. | 68 | | do. | 19th, Weather more settled and agreeable. | S. E. |
| 20. | Do. | 70 | | do. | 20th, Light breezes, air damp. | S. E. |
| 21. | Off Navarino | 74 | | do. | 21st, Fresh breezes, air hazy and damp. | S. E. |
| 22. | Do. | 72 | | do. | 22d, Strong gales, air damp and loaded. | S. E. |
| 23. | Do. | 73 | much r. | do. | 23d, Variable winds, heavy showers, air damp and loaded. | S. E. |
| 24. | At Sea | 70 | | fair | 24th, Weather more agreeable, air comparatively dry. | S. |
| 25. | Do. | 63 | rain | | 25th, Variable winds, squalls and rain. | W. |
| 26. | At Zante | 63 | much r. | | 26th, Weather squally, with much rain. | S. E. |
| 27. | At Sea | | | | 27th, Fresh breezes, weather more pleasant, air dry. | N. W. |
| 28. | Do. | 68 | | fair | 28th, Pleasant breezes, air comparatively dry. | N. W. |
| 29. | Do. | 70 | | do. | 29th, Weather very agreeable, air comparatively dry. | N. W. |
| 30. | Off Nigropont | 70 | | do. | 30th, Light breezes, serene fine weather, dews at night. | N. |
| 31. | Off Smyrna | 68 | | do. | 31st, Fresh breezes, damp hazy weather, dews at night. | W. |
| | | | | | | S. W. |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|---------|------|--|--------|
| 1827. | | | | | |
| Nov. 1. At Smyrna | 70 | rain | | Occasional rain, fresh winds. | S. W. |
| 2. Do. | 70 | do. | | Variable winds, with occasional rain. | S. W. |
| 3. Do. | 70 | much r. | | Rain, thunder, and lightning. | |
| 4. Do. | 70 | | fair | Sky beset with tumuli, atmosphere loaded, hazy. | S. W. |
| 5. Do. | 66 | | do. | Weather rather agreeable. | W. |
| 6. Do. | 54 | | do. | Cold chill weather, occasional heavy showers. | N. |
| 7. Do. | 63 | | do. | Cold winds, air more dry and agreeable. | E. |
| 8. Do. | 64 | rain | | Cold chill weather, considerable rain. | S. E. |
| 9. Do. | 64 | much r. | | Much rain, thunder and lightning, variable winds. | |
| 10. Do. | 68 | rain | | Winds variable, with occasional rain. | |
| 11. Do. | 60 | much r. | | Variable winds, frequent heavy showers, weather unsettled. | |
| 12. Do. | 64 | rain | | Damp chill weather, frequent heavy showers. | E. |
| 13. Off Smyrna | <i>neglected.</i> | | | Chill, dry, and rather agreeable. | S. W. |
| 14. Off Seio | 68 | much r. | | Strong winds, with much rain. | S. E. |
| 15. At Sea | 66 | | fair | Air clear, weather more settled, variable winds. | S. E. |
| 16. Do. | 68 | | do. | Weather very agreeable. | S. W. |
| 17. Do. | 68 | | do. | Steady breezes, dry agreeable weather. | N. |
| 18. Do. | 66 | | do. | Fresh breezes, sky stormy and unsettled. | N. |
| 19. Do. | 64 | | do. | Light variable winds, weather agreeable. | |
| 20. Do. | 64 | rain | | Some rain, but weather rather agreeable. | S. E. |
| 21. Do. | 64 | do. | | Variable, sky stormy, with rain, thunder and lightning. | |
| 22. Do. | 64 | do. | | Rain, thunder and lightning, variable northerly and southerly winds. | |
| 23. Do. | 63 | do. | | Fresh breezes, with occasional rain. | S. |
| 24. Do. | 60 | | fair | Fresh breezes, weather more settled and agreeable. | N. |
| 25. Do. | 52 | | do. | Strong gales, weather dry, but cold and chill. | W. |
| 26. Do. | 53 | | do. | Fresh breezes, cool agreeable weather. | W. |
| 27. Off Malta | 55 | hail | | Stormy tempestuous weather, rain and hail. | N. W. |
| 28. Do. | 60 | rain | | Variable westerly winds. | |
| 29. At Malta | 61 | | | Light variable westerly winds, some rain. | |
| 30. Do. | 60 | | | Variable winds, with occasional rain. | |

| Time when, and place where. | Med. Tem. Fahr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|---------|------|---|--------|
| 1828. | | | | | |
| Jan. 1. At Milo | 50 | | fair | 1st, Dry agreeable weather. | N. E. |
| 2. Do. | 56 | | do. | 2d, Pleasant dry weather. | S. E. |
| 3. Do. | 57 | | do. | 3d, Variable winds, weather pleasant, dews at night. | S. W. |
| 4. Off Scio | 60 | | do. | 4th, Weather agreeable, rain at night. | S. W. |
| 5. Do. | 58 | much r. | | 5th, Much rain, dull hazy atmosphere. | S. E. |
| 6. Vourla | 50 | rain | | 6th, Cold air, with occasional rain. | N. E. |
| 7. At Smyrna | 48 | do. | | 7th, Keen cold air, occasional rain. | S. E. |
| 8. Do. | 44 | sleet | | 8th, Chill winds, with snow and sleet. | N. W. |
| 9. Do. | 40 | snow | | 9th, Weather more settled, cold winds, some snow. | N. E. |
| 10. Do. | 36 | | fair | 10th, Agreeable, but cold chill weather. | N. E. |
| 11. Do. | 40 | | do. | 11th, Cold, chill, but dry weather. | N. E. |
| 12. Do. | 43 | | do. | 12th, Cold, chill, dry weather. | N. E. |
| 13. Do. | 45 | | do. | 13th, Dry agreeable weather. | N. W. |
| 14. Do. | 54 | rain | | 14th, Raw damp air, some rain. | N. E. |
| 15. Do. | 55 | | fair | 15th, Weather uncommonly fine. | S. E. |
| 16. Do. | 57 | | do. | 16th, Very fine weather, light variable winds. | |
| 17. Vourla | 57 | | do. | 17th, Weather very fine, light variable winds. | N. E. |
| 18. Do. | 29 | | do. | 18th, Strong winds, cold weather. | N. E. |
| 19. Do. | 28 | | do. | 19th, Weather extremely cold, strong breezes. | E. |
| 20. Do. | 31 | | do. | 20th, Air dry, but extremely cold. | N. E. |
| 21. At Smyrna | 35 | | do. | 21st, Cold, chill, but dry weather. | N. E. |
| 22. Do. | 44 | | do. | 22d, Cold, chill, dry air. | N. E. |
| 23. Do. | 45 | | do. | 23d, Variable winds, dry cold weather. | |
| 24. Do. | 47 | | do. | 24th, Light winds, good weather. | |
| 25. Do. | 45 | | do. | 25th, Cold fresh breezes, much snow on surrounding hills. | N. E. |
| 26. Do. | 33 | | do. | 26th, Cold fresh breezes. | N. E. |
| 27. Do. | 34 | | do. | 27th, Cold dry agreeable air. | N. W. |
| 28. Do. | 42 | | do. | 28th, Light chill variable winds, weather otherwise good. | |
| 29. Do. | 43 | | do. | 29th, Fresh breezes, cold chill weather. | N. E. |
| 30. Do. | 40 | | do. | 30th, Cold chill winds, weather otherwise good. | N. E. |
| 31. Do. | 42 | | do. | 31st, Light winds, weather pleasant, air dry. | |

| | | | | | | |
|---------|-----------|----|---------|------|--|----------|
| 1828. | At Smyrna | 44 | | fair | 1st, Very fine weather, much surrounding snow. | N. E. |
| Feb. 1. | Do. | 43 | rain | fair | 2d, Cold damp disagreeable atmosphere, with some rain. | N. E. |
| 2. | Do. | 45 | | do. | 3d, Moderate and fine weather. | N. E. |
| 3. | Do. | 45 | | | 4th, Dull cloudy sky. | S. S. E. |
| 4. | Do. | 57 | much r. | | 5th, Much and continued rain. | S. S. E. |
| 5. | Do. | 50 | do. | | 6th, Considerable rain. | S. E. |
| 6. | Do. | 41 | rain | | 7th, Continued rain. | S. E. |
| 7. | Do. | 40 | | fair | 8th, Cold chill air, much snow on surrounding hills. | N. E. |
| 8. | Do. | 30 | | do. | 9th, Dry frosty weather. | N. E. |
| 9. | Do. | 40 | | do. | 10th, Cold dry air. | S. W. |
| 10. | Do. | 56 | | | 11th, Strong winds, considerable rain. | W. |
| 11. | Do. | 50 | rain | | 12th, Much rain, thunder and lightning. | |
| 12. | Do. | 53 | much r. | fair | 13th, Light breezes, sky serene. | |
| 13. | Do. | 51 | much r. | | 14th, Much and continued rain. | |
| 14. | Do. | 50 | rain | | 15th, Variable winds, some rain. | |
| 15. | Do. | 45 | | fair | 16th, Cold chill damp atmosphere. | |
| 16. | Do. | 55 | | do. | 17th, Cold chill air, much surrounding snow. | N. W. |
| 17. | Do. | 46 | | do. | 18th, Air cold, but comparatively dry. | N. E. |
| 18. | Do. | 56 | rain | | 19th, Strong winds, with considerable rain. | S. |
| 19. | Do. | 57 | | fair | 20th, Pleasant weather, variable winds. | S. W. |
| 20. | Do. | 55 | much r. | | 21st, Much rain, thunder and lightning. | S. W. |
| 21. | Do. | 59 | | fair | 22d, More agreeable weather. | |
| 22. | Do. | 61 | | do. | 23d, Fine dry weather. | |
| 23. | Do. | 60 | | do. | 24th, Uncommonly fine weather, light agreeable winds. | E. |
| 24. | Do. | 58 | | do. | 25th, Air damp, chill, sky obscure. | E. |
| 25. | Do. | 64 | | do. | 26th, Damp hazy atmosphere. | |
| 26. | Do. | 65 | rain | | 27th, Variable winds, occasional rains. | |
| 27. | Do. | 57 | do. | | 28th, Variable winds, occasional rain. | |
| 28. | Do. | 56 | | fair | 29th, Fine weather, light variable easterly winds. | N. E. |
| 29. | Do. | | | | | |

| Time when, and place where. | Med. Tem. Fabr. | Wet. | Dry. | GENERAL REMARKS. | Winds. |
|-----------------------------|-----------------------|---------|------|--|--------|
| 1828. | | | | | |
| March 1. At Smyrna | 56 | much r. | | 1st, Variable winds, much rain. | N. E. |
| 2. Do. | 56 | do. | | 2d, Much rain. | N. E. |
| 3. Do. | 53 | do. | | 3d, Cold chill winds, much rain. | S. |
| 4. Do. | 56 | | fair | 4th, Sky beset with tumuli. | N. W. |
| 5. Do. | 54 | much r. | | 5th, Cold winds, with much rain. | S. |
| 6. Do. | 57 | rain | | 6th, Occasional rain. | |
| 7. Do. | 54 | much r. | | 7th, Dull clouded sky, much rain. | |
| 8. Do. | 54 | do. | | 8th, Variable winds, much rain. | |
| 9. Do. | 59 | rain | | 9th, Fresh breezes, rain; thunder and lightning. | N. W. |
| 10. At Sea | 54 | do. | | 10th, Occasional rain. | N. E. |
| 11. Do. | 52 | | fair | 11th, Clear dry chill air. | E. |
| 12. Do. | 58 | | do. | 12th, Fine clear weather. | W. |
| 13. At Grubusa | 60 | | do. | 13th, Fine serene weather. | W. |
| 14. At Sea | 60 | | do. | 14th, Light breezes, serene sky. | W. |
| 15. Do. | 53 | | do. | 15th, Weather very fine, light breezes. | W. |
| 16. Do. | 59 | | do. | 16th, Weather very fine, light breezes. | W. |
| 17. Do. | 59 | | do. | 17th, Very fine weather, light westerly breezes. | W. |
| 18. Do. | 60 | | do. | 18th, Agreeable weather. | |
| 19. Off Sicily | 60 | | do. | 19th, Fresh breezes, atmosphere damp and bazy. | W. |
| 20. Off Malta | 60 | | do. | 20th, Weather very agreeable. | W. |
| 21. At Malta | 62 | | do. | 21st, Light variable winds, heavy dews at night. | |
| 22. Do. | 66 | | do. | 22d, Light airs, weather very fine, heavy dews at night. | |
| 23. Do. | 67 | | do. | 23d, Light airs, fine serene weather, dews at night. | |
| 24. Do. | 66 | | do. | 24th, Agreeable weather, dews at night. | N. W. |
| 25. Do. | 66 | | do. | 25th, Very agreeable weather, dews at night. | N. W. |
| 26. Do. | 64 | | do. | 26th, Agreeable weather, dews at night. | N. W. |
| 27. Do. | 62 | | do. | 27th, Agreeable weather, dews at night. | N. W. |
| 28. Do. | 67 | | do. | 28th, Very fine weather, dews at night. | S. W. |
| 29. Do. | 60 | | do. | 29th, Light airs, weather very fine. | N. W. |
| 30. Do. | 64 | | do. | 30th, Light variable winds, weather very fine. | |
| 31. Do. | 60 | | do. | 31st, Northerly winds, weather uncommonly fine. | N. W. |



* K P.

